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AUTHOR	Hall, Blaine H.
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ABSTRACT

This manual is designed to help bibliographers, librarians, and other materials selectors plan and conduct systematic collection evaluations using both collection centered and client centered techniques. Topics covered in five chapters are: (1) planning the assessment; (2) collection-centered techniques, comprising the compilation of statistics, checking lists, catalogs, and bibliographies, direct observation, and the application of standards; (3) client-centered techniques, including availability and accessibility, user surveys, and periodical use study; (4) specialized assessments, consisting of weeding decisions and approval programs; and (5) reporting assessment results, which includes three examples. Advantages and disadvantages are discussed for each technique as well as step-by-step procedures for its application. Interspersed in the manual are various forms and surveys, e.g. those specific to English, chemistry, and Latin American collections. Appendices include a list of agencies accrediting academic programs at Brigham Young University, American Library Association standards for university libraries, statistical aids, and selected sources on collection assessments. Six references are provided. (RBF)

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COLLECTION ASSESSMENT MANUAL

Blaine H. Hall

Harold B. Lee Library
Brigham Young University
Provo, Utah
1981

IR010218

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INTRODUCTION

Carefully planned collection assessments can tell us both how we are doing in achieving our collection goals and how well we are meeting the collection needs of our patrons. This manual is designed to help bibliographers, subject librarians and other materials selectors plan and carry out a systematic collection assessment. Since no one measurement technique or group of techniques can be established for assessing all collections, the manual (1) outlines a procedure for formulating an assessment plan or methodology; (2) discusses a variety of measurement techniques from which the assessor may select to achieve specific assessment objectives; (3) provides a step by step procedure for applying the techniques; and (4) suggests ways to interpret and report the data. Included also are several appendixes that give additional information helpful to the assessor, such as random number tables and other statistical aids, copies of some of the articles referred to in the text, and a list of additional readings.

Assessing library collections, of course, can be a complex process, requiring a variety of tools and a certain amount of expertise, but a conscientious application of the measurement techniques and procedures in this manual will enable even the most inexperienced assessor to conduct a systematic evaluation of collection strengths and weaknesses.

The assessor should keep constantly in mind that measurement is not an end in itself. The measuring is done to provide data for more effective collection development decision making. Indeed, measurement for decision making is the basic premise on which the Lee Library assessment program is founded. An ongoing assessment program will provide a rational basis for needed changes in the library's collection program.

Appended to the manual are copies of several key articles on collection assessments that review the literature; provide a theoretical, philosophical, or pratical overview; and outline and discuss the application of various methods of measuring collection strength, weaknesses, and use, including one or two methods not discussed in the manual. Assessors desiring more information are encouraged to consult Appendix E.

The manual in its present loose-leaf form is not complete and should be considered a preliminary model. The librarians who use it are asked to provide criticisms, suggestions for additions or deletions, and information as to the time and effort required to implement the various techniques. Through this input revisions can be made to make it more useful and complete.

CHAPTER I

PLANNING THE ASSESSMENT

Only through careful planning can a collection assessment be systematic and thorough enough to produce accurate and reliable data. In planning such an assessment, the assessor should keep in mind five basic premises:

1. Assessments are to be conducted to obtain data for more effective collection development decisions.

2. Assessments should consider how well collections are meeting the needs of users, both present and potential.

3. Assessments must be based on a current, clearly stated collection development policy statement for the collection being assessed.

4. Clear-cut, written objectives or outcomes to be achieved by the assessment must be formulated.

5. Subjectivity of judgment as to collection quality or adequacy can be reduced by a careful selection of both collection-centered and client-centered measurement techniques.

The Lee Library, as a result of the Collection Analysis Project (CAP), has undertaken a program to improve its collection development program. Important ingredients of this program are (1) to evaluate the success of previous collection efforts, (2) to monitor its ongoing program, and (3) to provide empirical data for establishing priorities and allocating its resources to achieve its collection goals and objectives.

In a library rapidly approaching two million volumes, this evaluation can only be accomplished through careful planning over several years. Assessments will be coordinated by the Assistant Collection Development Librarian, who will be responsible for administering the library assessment program. All subject librarians and other materials selectors will be expected to perform collection assessments as part of their collection development responsibilities but must have the assessment coordinator's approval before the project begins. Having obtained preliminary approval for a projected assessment, the subject librarian should formulate an assessment methodology using the form at the end of this chapter. This should then be submitted to the Assistant Collection Development Librarian for final approval.

PROCEDURE

1. Select the collection or part of the collection to be assessed.

Some considerations to keep in mind in selecting the area(s) to be assessed are:

- a. The size of the collection and the time and resources available to perform the assessment.
- b. Faculty or department interested in the collection.
- c. Accreditation requirements of the department or college. (See Appendix A for a preliminary list of university programs presently accredited and requiring periodic review.)
- d. Growing, declining, or changing curriculum and research programs.
- e. Complaints from users or the awareness of other problems or concerns about a collection.
- f. Commitments to consortiums for information about collections.

You should also try to develop a long-term schedule and time-table for assessing the various collections you are responsible for to assure that university, library, and personal priorities are met.

2. Review the collection policy statement for the collection to be assessed.

The review should assure that policy statements reflect the current status of the following:

- a. The collecting level for the collection.
- b. Curricular and research programs served by the collection.
- c. Types and levels of materials acquired.
- d. Language, chronological periods, and geographical focus of materials acquired.
- e. Degree of overlap or cross-disciplinary use of the collection.
- f. Any cooperative agreements that might significantly affect the level of collection development.

This policy review is important because the data obtained from collection measurements can only be interpreted in terms of the collection purposes. Keep in mind, also, that while an assessment can provide data to help review collection policy statements, this does not eliminate the need to begin the assessment with as clear and current a policy as possible.

3. Determine the objectives to be achieved by the assessment.

The objectives for a collection assessment may vary considerably from librarian to librarian or collection to collection depending on (a) the time available, (b) the size of the collection, (c) the time elapsed since a prior assessment, (d) the purpose of the assessment (accreditation, changes in curriculum or research needs, justification for budget allocations, etc.) and (e) the kind of information needed about the collection or its use by patrons. But you must develop written objectives so you know what kinds of information you will need to obtain. Knowing this, you can then more purposefully select the measurement techniques and plan their application to provide the needed data.

Some of the objectives may be general, i.e.

(a) To learn more about the library science collection, its strengths and weaknesses.

(b) To provide information on which to build plans and specific recommendations to improve the library support to the Organic Chemistry Collection.

(c) To obtain data for revising the collection development policy for the Science Fiction Collection.

For an overall assessment of a collection, objectives stated at this level of generality would be appropriate, provided they are supported by more specific questions to be answered by the assessment. For example, general objective (c) above could be developed with the following specific questions:

Assessment Objectives for Science Fiction Collection

Overall Objective: To obtain data for revising the Science Fiction Collection Development Policy.

1. How adequate is the journal collection to meet patron needs?

2. Does the blanket order program profile provide the optimum materials needed in the collection?

3. Are there sufficient copies of heavily used titles?

4. Is the library obtaining adequate numbers of new titles to meet patron demands?

5. Are there changes in the curriculum that would require changes in the level of support the library should give the collection?

6. What is the availability and accessibility of the collection to patrons?

This example shows only a few of the possible questions that could be asked to provide a more precise statement of your assessment objectives.

But not all assessments need to be on such a complete scale to be useful. You may only need or want to measure one or two factors. You may only want to determine the adequacy or quality of a reference collection or of journals or of series or of recently published titles or of the primary works of one author. Or perhaps you just want to determine the shelf accessibility of materials in a collection or user opinions of the adequacy of a collection. But whatever your purpose, state it precisely and be sure it will provide useful data for more informed decision making.

The initital assessment of a collection would likely require a rather full and detailed measurement, but subsequent assessments may need only some follow-up measurement. The planning for subsequent assessments, therefore, should be based on the data and results obtained from previous measurements.

4. Select the measurement techniques to be used in the assessments.

Since Chapters 2 and 3 provide specific information about each of the measurement techniques, the procedures to use in their application, etc., this discussion will deal only with a few general consideration in selection measurement techniques.

Each technique has been developed to obtain certain kinds of information and must therefore be selected in terms of the objectives to be achieved. A shelf list measurement, for instance, can help you determine the gross size of a collection, but it cannot show you how accessible the collection is to patrons or how current and up to date the collection is. Nor does it tell you how good the collection is, even though we often assume that bigger is better. If your purpose is to measure the quality of the collection, you will obviously need to select other techniques, although gross size may be a good place to begin.

The important caution to keep in mind in selecting measuring devices is to select as many appropriate techniques as necessary to privide you with reliable information. You should in most instances plan to use both collection-centered and client-centered techniques. since each type approaches the measurement from a different point of view, used together they provide a check on each other. The former tends to focus on the adequacy of the collection for future patrons and the latter for present patrons. You will also need to keep in mind the time and other resources available. If these are limited, you may have to accomplish the assessment in stages over several years.

5. Estimate Resources Required.

Conducting assessments can be time consuming and require considerable clerical assistance for applying the various techniques. For this reason, you need to make fairly accurate estimates of the time and personnel required to conduct the assessment you are planning.

The following is the beginning of an estimation table that will be expanded as we gain more experience with various techniques and procedures. (The activities listed in the table are detailed in later chapters.)

Estimation Table

	Activity	Type of Person	Time
1.	Card catalog checking	Clerical	1 citation per minute
2.	Compiling sample title lists	Prof/Clerical	300 items, 15 hours
3.	MAC-DEL Test	Prof/Clerical	15 minutes per day
4.	MAC-SIM Test	Prof/Clerical	5 - 10 hours
5.	Availability Test	Prof/Clerical	50 hours
6.	Document Delivery Test	Prof/Clerical	4 - 10 hours
7.			
8.			
9.			
10.			
11.			

Using these estimates and others of your own, determine as accurately as possible the resources you will need to carry out your planned assessment. Include these estimates in the appropriate places on the Collection Development Leave Proposal form (available from the Assistant Collection Development Librarian). Attach to this form the completed Assessment Planning Form (p. 1.6) and submit this assessment proposal to the Assistant Collection Development Librarian.

ASSESSMENT PLANNING FORM

Name________________________________ Application Date____________________

Collection to be Assessed____

Proposed Start Date____________________ Proposed Completion Date____________________

A. Purpose(s) to be achieved by the assessment. Be as specific as possible.

(Use additional pages if necessary.)

B. Measurement Techniques to be used and what each will contribute to the assessment.

1. Collection-centered.

2. Client-centered.

(Use additional pages if necessary.)

Approved________________________________ Date____________________

Attach this completed form to your Collection Development Leave Proposal

CHAPTER II

COLLECTION-CENTERED TECHNIQUES

Numerous measuring techniques have been developed for conducting collection assessments. Some measure the collection against ideals or standards; others rely on counting or other mathematical and statistical computations; and still others focus on actual patron use of collections or their perceptions of how adequately collections serve their needs. All of these methods can furnish useful data for evaluation, but no one technique is sufficient in itself for conducting a thorough assessment, although a single method may be adequate for a limited evalution purpose. Collection assessments can utilize either collection-centered or client-centered methods, but a thorough assessment will use some of both. This chapter treats the collection-centered techniques: compiling statistics, checking lists, direct observation, and applying standards.

COMPILING STATISTICS

The most frequently used assessment techniques have been those involving counting, presumably based on the premise that the size of a collection is correlated with its quality. And while this is not always true—a carefully selected and weeded collection of 5,000 titles on a given subject, for instance, may be much superior to a 10,000 volume collection not so carefully managed in some other library—in research libraries, the larger the collection the more patron demands it will likely be able to supply.

The mathematical and statistical measures usually used are gross size, volumes added per year, percent of growth, circulation, unfilled requests, expenditures, and formulas.

For several reasons—lack of adequate records (unfilled and ILL requests) and inapplicability to evaluating subject or sub-collections (formulae and expenditures) some of these statistical measures are not appropriate for collection assessments at BYU, at least at this time, and are not included here. (When the acquisition system is automated, however, expenditures and other statistical measures will be possible.) Circulation statistics, will be treated in Chapter III with other client-centered measures. For the present gross size, and volumes added per year will prove worthwhile in our assessment program.

Advantages and Disadvantages

The advantages of using numerical data are that they (1) are often readily available, (2) easily kept, (3) lend themselves to comparisons with other libraries or to internal comparisons over time, and (4) can help to eliminate subjectivity. The disadvantages are that (1) the counting may be inaccurate because of improper recording or inadequate definitions of the categories or units to be counted, (2) the significance of the figures may be difficult to interpret in terms of judging collection quality, and (3) the data from one library may not be comparable with those from other libraries or even within the same library over time.

Gross Size

Gross size consists of measuring the shelflist to determine the number of titles acquired by the library. Counts may be made of the total holdings of the library, holdings in given subjects, holdings in specializedcollections (Victorian Literature, Maps, etc.) or holdings of specific types of materials (peridocials, microforms, etc.) in total or by subject.

A measurement of the Dewey shelflist will give the number of *titles* acquired prior to May 1977. The LC shelflist gives the *titles* acquires since that date. The RLIN system can provide the *number* of titles cataloged from February 1978 to the present, but about 35,000 titles were cataloged in LC prior to our joining RLIN. Thus, while the computer can provide the number of titles much more quickly than a count of the LC shelflist, it will not be as complete.

When doing a shelflist count, the following special shelflists should not be overlooked for certain kinds of materials. These are not duplicated in regular shelflist: Microfilm, Microfiche, Microprint, Microcard, Rare, Vault, Juvenile, Asian, Maps, Music (Dewey collection only), Victorian Literature, Melville, Burns, Whitman, Rowe, Welsh, Icelandic, Ancient Studies, Bean Museum, and Phonodisc.

Cataloging statistics are also available from the Catalog Department, but these counts are by *volume*, not *title*, and could not be combined with or compared to shelflist measurements, which are done by titles. Also the subject categories may not be precise enough for measuring some subjects. For our purposes, then, the shelflist measurement or the combination of the shelflist measurement and the RLIN statistics for the LC collection are the best bases for conducting a gross size measurement.

Procedure. Measure the shelflist as follows. With a retractable metal ruler, measure the total number of inches of tightly-packed cards in each drawer of the shelflist(s) appropriate to the assessment. Do not measure the length of the drawer itself. Measure the cards on their sides rather than on the top to avoid having to contend with tabs or guide cards. Be sure to exert the same amount of pressure each time you measure to assure the greatest accuracy. Record the total number of inches, multiply that number by 100, the number of cards per inch. Don't overlook any of the special shelflists appropriate to your study or any uncataloged collections acquired by the library.

Analysis of Data. The value of this gross title count is that it gives a rough quantitative indication of collection quality. It is generally agreed that there is a positive correlation between the size of a library collection and its ability to meet the needs of patrons, providing, of course, that the collection is appropriate to meet the needs of patrons served and that it is continuing to grow. However, the number of titles in a collection is not necessarily a guarantee of quality or adequacy. Other measures must be used to determine these criteria.

Probably the greatest value of gross size figures is that they can be used for comparisons with other libraries or with the same library for longitudinal studies over time. A comparison of BYU figures with the Titles Classified by the Library of Congress Classification: National Shelflist Count, 1977 ed. (Locked Case Z731.T6/1977) is one possible comparison. However, this data is by LC classification only, and no satisfactory Dewey to LC Conversion Table yet exists. Future counts will likely provide such tables, since UC, Berkeley, received a grant in 1978 to develop one. Again, however, gross size is only a rough indicator and does not consider differences in academic programs or research needs among libraries. It simply makes a good beginning point for any collection evaluation to be supplemented with other kinds of data obtained from using other measurement techniques.

For subsequent assessments, of course, growth figures for each year since the initial shelf count could be obtained from the RLIN computer data and added to the initial shelflist count figures to avoid re-measuring the shelflist. Gross figures can also easily be figured on a per capita basis if this is necessary or useful, provided, of course, you can determine the number of possible users of a given collection.

Volumes Added and Percent of Growth

It is generally agreed that the straight count of volumes or titles added per year is a more reliable indicator of collection quality than the percent of growth. The latter approach penalizes libraries with an active weeding program. Yet their collections may be superior to those not carefully and consistently pruned of obsolete titles. At BYU the Catalog Department keeps statistics of the numbers of volumes added each month and year. However, these figures are not compatible with the title count obtained from a shelflist measurement, and the subject breakdown is not adequate for assessing many subject collections. The best source for the number of titles added per year will be RLIN computer records.

Analysis of Data. The volumes or titles added data can best be used in conjunction with the gross size data obtained from a shelflist measurement and with the information from other measurement techniques such as list checking. If it were possible to obtain exact figures on the number of titles published each year that should have been acquired by the library, comparing the titles added with this figure would immediately show whether or not we are keeping up with new materials. Unfortunately, no such data is available. Some very gross approximations could be made from the Baker & Taylor report of titles offered to academic libraries in various subjects and/or the statistics on book publishing included in the Bowker Annual. The subject categories, however, may be inadequate, making such a comparison difficult and marginally useful. Using some of the availability studies discussed in Chapter III will provide a better indication of how well the library is doing in acquiring recent publications.

Future Statistical Possibilities

When the acquisitions system is automated, expenditure data by subject will be available. These data can then be combined with circulation data by subject, the number of potential patrons, and the academic and research programs served by the various subject collections to provide an excellent statistical profile of holdings, acquisitions rate, expenditures, use, and level of needed patron support. When these additional statistical resources are available, they will be added to the manual.

CHECKING LISTS, CATALOGS, BIBLIOGRAPHIES

List checking has long been used to measure the quality of library collections. In many research libraries, it is often the major, if not the sole, measure used. List checking essentially assesses a collection in relation to what is published independent of immediate demand, availability, or use. So long as the assessor can precisely delineate the curriculum and research needs of the specific collection being assessed when applying this method, it offers much to the assessor. When considering the use of this measurement technique, consider the following advantages and disadvantages:

Advantages and Disadvantages

The advantages of this methodology include the following:

1. A variety of published lists is available: comprehensive, specialized, popular, general, or research.
2. Many such lists are backed by the authority and competence of expert librarians and specialists.
3. Many lists are updated regularly to take into account the currently published materials.
4. Lists can be compiled according to the needs of an individual library or type of library, although this may be time consuming and require a great deal of expertise.

5. The procedure of searching lists is easy to apply, although the process can be time consuming.

On the other hand, lists have some disadvantages:

1. Available lists may have been used previously as buying guides for the library being evaluated.
2. Lists can be biased toward the viewpoint of the compiler or a group.
3. Lists, even if appropriate for the subjects to be evaluated, may not reflect the interests, collection levels, or other purposes of the library.
4. Many lists are not revised and become out of date.
5. Lists may not be as representative of the library's subjects or purposes as its holdings are.
6. Lists may be hard to find or compile for some subjects.

Types of Lists

Many types of lists of value in assessments are available or the assessor can develop lists for specific needs, albeit not without a great deal of time and effort. The following kinds of lists (with an example of each) should be considered. Each assessor will have to determine specific lists suitable for each collection to be assessed.

A. Standard bibliographies or basic lists

   Books for College Libraries

B. Printed library catalogs

   Sibley Music Library Catalog of Sound Recordings: The University of Rochester, Eastman School of Music

C. Specialized bibliographies

   Persons;

   Subjects:

   Time Periods:

D. Current or retrospective publishers' lists

   Book Publishing Record

   Reprint house catalogs

E. Lists of Reference Works and Bibliographic Guides

Sheehy, Guide to Reference Books

F. Lists of periodicals

Benson, N. L., "Latin American Books and Periodicals," Library Trends 1967.

G. Authorized lists from government or professional associations

UNESCO, Bibliografia General de la Literatura Latino-Americana, 1972

H. Published acquisitions lists from other libraries

Gainesville. University of Florida. Handbook of Latin American Studies

I. Literature Surveys for various disciplines

Hoffman, "Survey of German Research Tool Needs," Monatshefte, 70 (1970), 239-253.

J. Citations from bibliographies and basic texts in a discipline

P. R. Lewis, Literature of the Social Sciences

K. Citation index lists

SCI Journal Citation Reports
SSCI Journal Citation Reports
A&HCI Journal Citation Reports (when they become available from ISI)

Procedure

1. Know the literature of the field you are assessing. An encyclopedia article, a journal article or chapter(s) in books can help you become knowledgeable if you have not had time to read the major subject journals regularly or to do constant reading in the field. For some subjects, specific manuals on how to develop a library collection for that discipline are available. These are often not only lists useful for checking but contain very basic bibliographies of materials recommended for developing the librarian's expertise.

2. Select the best type of list(s) that will meet your assessment objectives.

3. Select the specific list(s) you will be checking. Normally these lists will be in one of the library's reference collections. If they are not, you may want to have them reclassified. You should

also check with the faculty representative or other faculty members, as necessary, for their suggestions, if any. It is important that you search thoroughly to find the best possible lists against which to evaluate the collection. The quality of your assessment will be no higher than the appropriateness of the list you choose.

4. Determine the extensiveness of the checking required to give the desired results. You have two choices:

a. A complete (100 percent) check of the titles in the list(s) chosen. If your list is a bibliographic essay in Library Trends or some other journal listing 30 items, you would not want to check fewer. But if your list contains 4,000 entries, you might want to do a sampling, depending on the amount of time and the thoroughness of the assessment intended. If you are checking to determine which titles you should purchase, of course, you would have to do a complete check. It takes approximately one minute to do two titles from an alphabetized list, longer if the titles are arranged in some other way.

b. A random sample. If the bibliography is extensive and you are assessing to determine general adequacy rather than trying to develop a buying list, a random sample using the Random Number Table in Appendix B.5 would be preferable. Using the table will help you obtain a statistically valid and reliable sample. You will need to determine an approximate sample size. (See Appendix B.1)

For a given assessment objective, you may not need to check every section of a list or bibliography. Choose only those that are appropriate to the collection being assessed. (What you are doing is creating a weighted sample.)

5. Check the list against holdings in the card catalog. Use the most efficient method possible:

a. Alphabetical. This is the most efficient way to check a list against the card catalog since it avoids a lot of running back and forth. But if the effort to alphabetize the list takes too much time, then another method can be used.

b. Take each item as it comes in the list. If the list is short and not easily alphabetized, such as in a bibliographic essay, this is the best method.

c. Batching. If a lengthy bibliography contains several chapters or sections, it may be more efficient to check all the A's in each chapter before going to the B's.

Whatever method you use, determine how the bibliography is to be marked to indicate items in the collection. Will a check-mark suffice, or do you need to write in the call number? Always write small but legibly and always in pencil. (Ink cannot be erased easily and will sometimes smudge.)

If you are not doing the checking yourself, observe your assistant periodically to see that he is doing the checking in the most efficient way.

Analysis of Data. The data can best be displayed by using a table similar to the one below.

RESULTS OF GENERAL LINGUISTICS SURVEY. Wawrzyszko

Sections of Bibliography	Total Entries	Penrose Library	Percentage
Abbreviations	3	3	100
Directories	2	2	100
Bibliographies, Abstracts and Indexes	27	15	56
Current Bibliographies	17	13	77
Dictionaries & Glossaries	32	25	78
Encyclopedia of Linguistics	1	1	100
Periodicals	27	14	52
Theory & Philosophy	68	57	84
History	4	3	75
TOTAL	181	133	73

The results of list checking are usually expressed as a percentage. But neither the data or the percentage tell you anything specific about the quality or adequacy of the collection. This requires an interpretation in terms of (1) the objectives of the collection, (2) the development level established for the collection, and (3) a breakdown of the collection into types of resources. You might need search categories as (1) primary sources, (2) secondary sources, (3) reference works, (4) indexes, (5) periodicals, (6) etc. You might also want an analysis by subject areas; for example, (1) history of chemistry, (2) organic chemistry, (3) inorganic chemistry, (4) applied chemistry, (5) etc. Generally, these areas should have been determined as you planned your assessment.

DIRECT OBSERVATION OF COLLECTIONS

This technique evaluates the collection through a visual inspection conducted by one or more experts—subject specialists, scholars, librarians, or consultants. The examination may reveal size, scope, depth, and significance of the collection, recency of material, physical condition (denoting level of use or non-use), and the general atmosphere of the stack area.

Advantages

1. It can quickly reveal size, scope, and quality of the collection.

2. It is impressionistic and not readily quantifiable.

3. It will not usually result in a buying list of needed titles.

Anyone contemplating using this technique should be certain of the qualifications of the evaluator, since the results depend entirely upon the experience of the evaluator and the quality of his perceptions. It is also important that the evaluator be knowledgeable about the academic program supported by the collection. But if the expertise is available, this method requires much less time than other methods with immediately available results.

Faculty members in the various academic departments are probably the most likely source of the required expertise. It may be possible, however, to obtain the services of a consultant or, in some instances, to have a librarian with sufficient expertise make such an evaluation.

Analyzing the Data

The focus of an expert appraisal should be on the strengths and weaknesses of a collection with an emphasis on what is needed to bring the collection to the desired level of quality or adequacy. Since the evaluator should be required to write a formal evaluation report, he will provide his own analysis.

APPLYING STANDARDS

Applying standards to evaluate library collections has been a long-accepted practice. Regional accrediting associations have established standards for college and university libraries as has the Association for College and Research Libraries (ACRL), and many professional associations or societies have established standards for subject collections that support their professional or educational programs. In recent years, the emphasis in these standards has been on (1) quality rather than quantity, and (2) judging the adequacy of the collection or library in terms of the institutional goals and objectives rather than against some abstract ideal. Frequently, too, the statements include a list of things to be considered by the accreditation teams in making their evaluations. Together these form a more or less useful guide to librarians building and assessing collections. These statements often deal with housing, seating, lighting, library services, etc., but the focus in this manual will be on standards for library collections, although the assessor may need to obtain information about these other matters as well.

This manual does not provide a complete list of standards statements for all subjects, but Appendix A contains a recent list of associations that conduct accreditations of academic programs at BYU. Copies of appropriate standards can be obtained from them or perhaps from the academic departments on campus. A few examples of such statements are included and are illustrative of what you will likely find.

Northwest Association of School and Colleges Standards

The statement from the Northwest Association of Schools and Colleges, the association that conducts ten-year university-wide accreditations of BYU, will prove useful not only for the periodic university-wide accreditations but also as a useful guide for subject collection evaluation in the absence of specific subject collection standards.

Northwest Association of Schools and Colleges

A. Standard

The library is a vital instrument of instruction. It serves as an indispensable agent not only in general education but also in the cultural development of students, faculty, and the community it serves. Libraries are increasingly becoming not only repositories for books and periodicals, but also student and faculty service centers. As an indispensable part of the complete instructional program, many libraries are assuming the responsibility for audio-visual equipment and materials, music recordings, and art collections.

The library should be administered as part of the instructional program by a well-trained professional staff with representatives of the teaching faculty acting in an advisory capacity. Services should be evaluated regularly to observe the library's effectiveness through the nature and extent of its use.

The library holdings should, by quality, size and nature, support and stimulate the entire educational program. Substantially stronger holdings should be required for graduate and research programs. The collections should be housed in a well-lighted, ventilated and adequately equipped building, with sufficient seating capacity to accommodate the needs of the students and faculty. The library should be open adequate and appropriate hours with the materials organized for easy access, use, and proper presentation.

The Northwest Association considers the standards of the American Library Association for two-year, college, or university libraries useful guidelines.

B. Description

1. If available, supply a printed leaflet or brochure that describes the campus library facilities and the services provided.

2. Describe the extent and method of instruction given students regarding the library and its use.

C. Analysis and Appraisal

Analyze the institution against the library standard. (Note: This is a request for analysis with a minimum of description. Careful judgment is expected. Please consider, but do not limit yourself to, the following items in the analysis:)

1. Compare the library holdings with recent bibliographies and standard college library guides. Report the findings with particular attention to strengths and weaknesses.

2. Is the training, experience, and performance of the professional and non-professional library staff satisfactory? Please provide sufficient detailed information as a basis for your answer.

3. How does the faculty participate in book selection, library usage, and improvement of library services?

4. Do the library facilities with respect to housing, lighting, seating, hours of operation, and so forth, adequately serve the needs of the students and faculty? Please provide sufficient detailed information as a basis for your answer.

5. How many volumes are owned by major classifications?

6. How many volumes have been accessioned, by classifications, for each of the last three years?

7. What procedures are followed for routinely discarding obsolete library materials?

8. Is the library budget adequate to provide the necessary services and to keep pace with the growth of the institution? Please provide sufficient detailed information as a basis for your answer.

9. In the daily operations of the library, is the atmosphere one which attracts students, and is it conducive to excellence in academic performance?

10. What evidence is there to show the extent of use of the library by students and faculty for class references and for personal purposes?

11. What are considered to be the major strengths and weaknesses of the library? What immediate steps are planned to improve the library?

The most recent ALA standard for university libraries recognized as useful by the Northwest Association is found in Appendix B.

Professional Association Standards

The following statements of a few professional associations are indicative of various subject collection standards:

Social Work Education

5210. The book, periodical, and reference collection shall support—by quality, size, nature, and appropriate duplication of holdings—the instructional and research programs of the school and be assembled in such a way as to be readily accessible for student use.

5211. The holdings shall include the considerable body of fugitive material which is essential to social work education.

5212. If a school offers post-master's programs of study, the library holdings of the university shall include, in addition to those necessary for the master's degree program, a wide range of background material, a wide range of holdings suitable for research purposes, and a strong collection in the social and behavioral sciences and the humanities.

Art Education

The library should adequately support the undergraduate program with no less than 5,000 volumes on art and related subjects, plus at least 25 periodicals, and should be staffed by an adequate number of professionally qualified personnel. The slide collection should provide at least 10,000 items. These figures apply to institutions with relatively small enrollments. Larger schools or schools with more complex offerings should have proportionally larger library collections. If a graduate program is offered, the library collections should be substantially in excess of the minima stated above.

Teacher Education - Basic Programs

4.1 Library Standard: The library is adequate to support the instruction, research, and services pertinent to each teacher education program.

4.2 Materials and Instructional Media Center Standard: A materials and intructional media center for teacher education is maintained either as a part of the library, or as one or more separate units, and is adequate to support the teacher education programs.

Teacher Education - Advanced Programs

G-4.1 Library Standard: The library provides resources that are adequate to support instruction, independent study, and research required for each advanced program.

(Illustrative questions which accompany the standards include these:)

Standard 4.1 Library: What evidence shows that the library collection includes: a. Standard and contemporary holdings in education (books, microfilms, microfiche copies, etc.)? b. Standard periodicals in education? c. Such additional specialized books, periodicals, and other resources needed to support each teacher education program? What evidence shows that the institution, in maintaining and improving the quality of its library holdings in teacher education, seriously considers the recommendations of: a. Faculty? b. Appropriate national professional organizations and learned societies? c. A nationally recognized list (or lists) of books and periodicals?

As these examples illustrate, most standards are expressed in broad general terms requiring interpretation on the part of the evaluator. Some offer little or no help as to the kinds of information required or the methods of obtaining such information. However, in spite of the difficulty of application, standards are an important consideration for library collection assessments, since accreditation of academic programs and often budget allocations are based upon them. The assessor should likewise remember that most standards are intended to be minimums not maximums, an especially important consideration if research libraries are not to be hampered in their ability to build adequate research collections.

Advantages and Disadvantages

In using standards in collection assessments, the assessor should keep in mind the following advantages:

1. They can (and should) be related to the goals and objectives of specific libraries and universities.
2. They are generally widely accepted, authoritative, and persuasive in getting support from administrators.
3. They are especially effective when promulgated by accrediting agencies.

Their disadvantages include:

1. Stated institutional or library goals and objectives may be difficult to evaluate objectively and may not be amenable to objective evaluation.
2. Interpretation of the standards is sometimes difficult.

3. Application of the standards is sometimes difficult because they are not readily quantifiable.

4. Experts may disagree about their validity.

Procedures for Applying Standards

1. Appendix A contains a list of accredited programs at the university. You should check with the academic department to plan well in advance for any upcoming accreditation. This will help the library avoid the too-frequent problem of short notices of upcoming accreditation visits. Indeed, it will provide librarians with the ability to take the initiative with the academic departments.

2. Determine in consultation with the faculty representative or the academic department the appropriate applicable standard statement (if any) to be used for the collection to be assessed.

3. Obtain a copy of the current statement. (See Appendix A for the names and addresses of accrediting agencies from which you can obtain a copy if one is not available from the department.)

4. If the purpose of the evaluation is for an accreditation self-study, determine through consultation with the academic department exactly what information will be needed.

5. Having determined what information is needed, select the measurement techniques that will provide the required data.

6. Consider what non-collection related data is needed and obtain this from the appropriate sources. (Information about library use instruction, reference services, etc. can be obtained from the Assistant Director for Information Services. Information on physical facilities, seating, etc. is available from the Assistant Director for Administrative Services.)

7. Prepare a written report of your findings to be made available to the academic department and/or the accreditation team. (See Chapter V, p. 5.3. for an example of a report done for Teacher Education in 1980.)

In addition to their use for collection assessments, standards can serve as a basis for building library collections and services. All subject librarians should become familiar with the standards appropriate to their disciplines and use them in developing collection policies and guidelines.

CHAPTER III

CLIENT-CENTERED TECHNIQUES

Collection-centered assessments enable a library to test its holdings primarily against external standards, certainly important considerations for determining its adequacy and quality. However, librarians are well aware that the collections themselves do not necessarily create satisfied clients. Books, even if acquired and included in the catalog, are not always immediately available on the shelf, for a number of reasons, and even when they are, users do not always find them without difficulty and delay.

Since the purpose for acquiring collections is primarily to make them available and accessible to patrons, the ultimate success of a collection development program cannot be determined solely by collection-centered measurements. Only by measuring the quality of actual and perceived use can the library really determine the utility of its collection development program to patrons.

Various surveys of patrons can be used to determine user perceptions of their needs and the library's success in meeting those needs. And a number of availability and accessibility measures, using either simulated or actual data, can be used to determine the capability of the library to make its materials available to users with as little delay and difficulty for the patron as possible. Since availability and accessibility are affected by various library policies and procedures, these measures can provide useful data for making more effective library decisions.

AVAILABILITY AND ACCESSIBILITY

Availability refers to the probability that a patron will find desired documents on the shelf when he needs them. Accessibility refers to the difficulties (usually measured in time delays) that he encounters in actually obtaining the document. Through the use of availability and accessibility studies, a library can measure its capability of providing needed documents to patrons.

The availability and accessibility measures recommended here have been selected from a number in the literature because they are effective and relatively simple and not too time consuming to employ. Additional measures using other methods for gathering data are included in the list of readings (2, 17) and could be used if desired.

Since most of these measures require sampling techniques and other statistical considerations to ensure validity and reliability, you will need to refer to Appendix C. for information on these matters. The statistical formulas peculiar to a given technique are provided with the discussion of the technique.

Document Delivery Capability.

The document delivery capability measurement outlined here was developed by Orr and others (12) for the National Library of Medicine but has been shown to be applicable to other types of libraries as well. The Document Delivery Test combines both availability and accessibility into one numerical index number by measuring both the adequacy of the collection and the speed with which the library can meet patron demands, either from its own stock or from ILL. Test results are computed into a Capability Index (CI) showing the relative ability of the library to serve patron demands. If all items are immediately available on the shelf, the index is 100.

However, since the samples are not derived from actual demands by patrons, this test is best considered a measure of the potential document delivery capability rather than the actual capability. Other techniques are available to measure the capability of the library to meet actual patron demands, but the DDT best measures the ability of the library to meet the demands of future patrons. We need both kinds of measures in our arsenal of measuring devices.

The test involves obtaining a random sample of 300 bibliographic citations from a much larger pool and checking them against the card catalog and the shelf. If they are not on the shelf (immediately available) or never acquired, they are searched further to determine their status in the library and how long it would take to make them available or, if not acquired, to see how long it will take to obtain them on ILL. The test takes four hours plus to administer, depending on the number of monographs in the sample, and not including the development of the 300 citations, and is 95 percent reliable. Its value and validity is dependent upon the representativeness of the citation sample and more importantly on how well the sample actually represents the actual needs of the library users.

To more closely approximate actual users, staff members selected to check the sample against the catalog and the shelves could be newly hired student assistants. Students, clericals, or professionals trained in how to conduct the follow-up searches should search the "not on the shelf" and "not acquired" items following the initial search of the catalog and shelves.

Procedures

1. Select the universe or citation pool to be sampled.

The major problem here is deciding on the citation pool. Several possibilities suggest themselves.

a. The shelflist. This can be done for the entire library or for a particular subject collection. It reveals the shelf availability of items acquired by the library but not what was not acquired. (See Appendix C, p. C.3 instruction on selecting a shelflist sample.)

b. Bibliographic references from basic lists, bibliographies, etc. These may be the same ones used in the list checking measurement. This source will avoid the bias of not including items not in the collection.

c. Citations from a select group of journals or monographs identified as reflecting the clients' interests in the collection.

d. Baker-Taylor, Blackwell, or other approval plan jobber invoices for a given period. This would measure the capability of the library to furnish documents obtained for a certain time period and could be most useful for studying recently published items. It would help to remove the bias of the shelflist sample which contains a high percentage of older items less likely to be in use and could more closely approximate actual demands. It would, of course, leave out non-standing order or blanket order materials.

e. Recent years of book publishing record for a given subject. This would measure the library's ability to provide recently published materials. However, this sample would be biased by including materials that the library did not and should not acquire.

f. Bibliographies on various subjects obtained through CARS searches. This will reveal the library's capability to support with documents its online bibliographic search services.

g. The Recent Acquisitions List. This could be useful for checking on items recently cataloged.

The use of citations obtained from theses, dissertations, and works written by BYU faculty and students should be avoided since the likelihood that the collection available in the library influenced the items cited makes this methodology fundamentally unsound.

The consideration to keep in mind in selecting the citation pool from which to derive the sample is that it should be as representative of user demands as possible. It should also be quite extensive—Orr suggests about 4,000 items—to achieve statistical validity at the ± 95% level. If the pool is smaller, a larger percentage of items would need to be sampled.

2. Using the sampling techniques and random number tables in Appendix C, select a 300 item sample, and enter each onto

a Document Delivery Data Sheet (see p. 3.6.) Check each item in the card catalog. This step should preferably be done by a recently hired student assistant to more closely approximate actual users.

3. Following the completion of the above steps, a professional or trained clerk or paraprofessional should take all the slips for items not located in the catalog or on the shelves, recheck the catalog, and try to locate in the library the acquired item according to the categories on the Document Delivery Data Sheet. Some items may require a second search the following day.

4. Having completed all the data sheets, tabulate the results into Column 1 of the Document Delivery Test Analysis Form (see p. 3.7.).

5. Multiply the number in each of the 17 categories by the time code and enter the amount in Column 3. The time codes indicates the following delivery times:

Code	Time
1	Not more than 10 minutes
2	More than 10 minutes, but not more than 2 hours
3	2 hours to 24 hours
4	Over 24 hours to one week
5	Over one week
*EDT	
**ORT	

6. Using the following formula, complete the data analysis to determine the Capabaility Index (CI):

$$CI = \frac{5 - \text{mean speed}}{4} \times 100$$

To determine the mean speed, total columns 1 and 3 and divide column 3 by column 1. For example, column 1 (total sample) is 300 and column 3 (composite time total) is 855, the mean speed would be 2.85. Applying this to the above formula, you obtain:

---

*EDT = Estimated delivery time. This could be 1 to 5, depending on the whereabouts of a given title, and will have to be determined on a title by title basis.

**ORT = Optimum return time. This could be 1 to 5, depending on the actual due date of a given title in circulation. It should be determined on a title by title basis.

$$CI = \frac{5 - 2.85}{4} \times 100 \qquad CI - \frac{2.15}{4} \times 100$$

$$CI = .5374 \times 100 = 53.75 = 54$$

Analysis of Data. The Capability Index determined by this measure combines delivery time and the adequacy of the collection in a single number indicator of library service. However, the meaning of the number can only be interpreted in terms of the individual library or library collection. The higher the Index, the less time the patron must wait to obtain the desired material. Roughly, each of the five delivery time categories would be equivalent to 20 points on the index scale. An index of 80-100 would tend to indicate that the majority of the materials would be available within 10 minutes, whereas an index of 0-20 would mean that a majority of the items would be delivered in over a week. It would also indicate a weak collection. But if the curriculum and research program supported by a collection is small a lower CI may not be as serious as it would for a collection supporting a more extensive academic program. Keep in mind that since this is only a simulation and not a measure of actual demands, its adequacy as a measure of actual demands made on the library depends on how well the sample represents actual needs of present and future patrons.

The Document Delivery Test Analysis Form can also provide additional useful information about the collection and its management. For instance, you can determine the percent of the sample in various categories, i.e. items in or not in the collection, items immediately available on the shelf, total items in circulation or circulating to the various categories of users, items classed as missing, etc. It is also possible to tabulate the data obtained from the DDT on the Availability Analysis Form (p. 3.15) to arrive at a different indicator of availability. Since collection measurements require considerable time and effort, try to obtain as much useful information as possible from each technique used. For discussion of further uses of DDT data and its interpretation, see Orr (12).

DOCUMENT DELIVERY DATA SHEET

3.6

_______________ / _______________
Author(s) or Editor(s) (Books only) Journal or Book Title

____

_______________ / _______________ / _______________
Volume Pages Date

____

1. (CIRCLE ONE)

In library's collection? No 1 Yes 2
↓
STOP

2. (CIRCLE ONE)

On shelves: No 1 Yes 2
↓
STOP

3. (CIRCLE ONE)

Off-shelf status E.D.T. Circulation 3 Can't locate in 1st search X

Bindery 1 (_______)
In process 2 (available? Y N)
In storage 3 (_______)
Special location 4 (Located on cat. card Y N)
To be shelved 5
Recorded as missing 6
Other known status 7 (_______)

(SPECIFY _______________)
↓
STOP

4. (CIRCLE ONE)

Circulation status (Loan period)

Reserve 1 (_______)
Inter-library loan 2
Faculty 3 (Recall? Y N) (_______)
Students (Undergrad.) 4 (Recall? Y N) (_______)
Students (Grad.) 5 (Recall? Y N) (_______)
Other 6 (Recall? Y N) (_______)

(SPECIFY _______________)
↓
STOP

5\.

Result of second search
On shelf 1
Can't locate 2
Other 3

(SPECIFY)_______________
____
↓
STOP

COMMENTS: (e.g. location tool problems)

DOCUMENT DELIVERY TEST ANALYSIS FORM

	Number of Sample Items by Category	Time Category	Composite Time Total
1. Not in collection		5	
2. On shelf		1	
3. Checked out - reserve		2	
4. Checked out - faculty		*ORT	
5. Checked out - grad.		*ORT	
6. Checked out - undergrad.		*ORT	
7. Checked out - ILL		*ORT	
8. Checked out - other		*ORT	
9. In bindery		5	
10. In process		4	
11. In special location		*EDT	
12. Reshelving process		3	
13. Recorded as "missing"		5	
14. Other known locations		2	
15. On shelf - 2nd search		3	
16. Can't locate - 2nd search		5	
17. Other outcome - 2nd search		*EDT	
TOTALS			

Mean speed - Total of column 3 divided by the total of column 1

$$CI = \frac{5 - \text{mean speed} \times 100}{4}$$

*Estimated Delivery Time (1-5)	This could be 1-5, depending on the whereabouts of a given title, and will have to be determined on a title by title basis.
*Optimum Return Time (1-5)	This could be 1-5, depending on the actual due date of a given title in circulation. It should be determined on a title by title basis.

Availability Measures

Paul Kantor has developed an availability test for the ARL Collection Analysis Project that utilizes data obtained from users of the card catalog who are conducting author or title searches for materials. As patrons approach the catalog, they are given an Availability Study Form and asked to use it as scratch paper on which to write the author, title, and call number of books they are trying to locate during this visit to the library. Then, as they search for the desired titles they are asked to mark those they can't find and to deposit their slips in a collection box as they leave the library. About every 15 minutes, a library searcher takes the sheets from the box and tries to locate the checked titles or to determine why they are not available. The data is then tabulated on the Availability Analysis Form (p. 3.15) and analyzed to compute the effects of determinants of availability and an overall percentage of availability. The process is simple, but does require sufficient help on the day of the study to hand out the sheets to patrons and to do the follow up searches each fifteen minutes. The availability can also be based on a sample from the shelf list or other citation source, such as those discussed on p. 3.3, but a shelf list sample tends to over estimate availability because many of the items in the sample are not used by today's clients and are thus more likely to be in their proper place on the shelf.

However, if desired, it is possible, as noted earlier, to tabulate the data obtained from the DDT Document Delivery Data sheets on the Availability Analysis Form (to be discussed later) to arrive at a different indicator of collection availability.

This measure determines the level of immediate patron satisfaction and the causes for patron failure or dissatisfactions. It postulates that patron failure to find desired titles is a factor of several ordered determinants: (1) failure of the library to acquire the desired book (DACQ); (2) failure of the patron to use the catalog correctly (DCAT); (3) failure to find the book because it is in circulation to another patron (DCIRC); (4) failure of library procedures such as slow reshelving, putting items in special locations other than the stacks, etc. (DLIB); and (5) failure of the user to find the book when it is correctly shelved (DUSER). These determinants must be arranged in this order because if number 1 is true (the library failed to acquire the title) nothing else applies, if number 2 is true (the patron misread the catalog) then that is a sufficient cause for failure, and so on.

Procedures

1. Select an appropriate time for conducting the study. It should not be during an atypical time of the year, such as the beginning or end of the semester or during spring or summer terms when the student body is significantly smaller than usual, unles you have a reason for measuring the availability of materials during these terms. One day is usually adequate to gather a sufficient sample, about 400 titles, although it can be done over several days during the

semester if desired or if needed to obtain sufficient numbers for the sample.

2. Prepare sufficient copies of the Availability Study Forms (p. 3.12)(500 should be adequate to begin with) and have adequate help trained to assist in the handing out of forms and in conducting the follow up searches at fifteen minute intervals. It is important that the follow up be done promptly to minimize the effect of other patrons who might be looking for the same titles. The searching takes about 10 minutes per item.

Searchers should be provided with the Availability Study Searcher checklist to guide them in the searching process (p. 3.13). The searcher should not spend a lot of time trying to locate books that might be in use in the building nor should he assume that all books not circulating or not on the shelves are in use. If no trace can be found of the book, put it in the category 10 and code it DLIB.

3. As the Availability Study Forms are dropped of at the exit controls, they should be separated into those with items marked "Can't Find" and those not marked. The latter are assumed to be items that were promptly available to the patron and will be tabulted in the analysis phase of the study.

Those marked "Can't Find" should be searched immediately using the following order:

a. Is the item readable? If NO, tally as DX (undecipherable) If YES, continue

b. Is it in the catalog? If NO, tally as DACQ If YES, continue

c. Is call no. correct? If NO, tally as DCAT If YES, continue

Note: Complete these first three steps for all items in the batch before going to step d. These three steps are all done at the card catalog.

d. Is the book on the shelf? If YES, tally as DUSER. If NO, continue

f. Is the book checked out? If YES, tally as DCIRC

g. If none of the above... tally as DLIB

You may want to subdivide any of these categories and pursue the matter further. This will enable you to pinpoint more exactly the causes of failure within the category. The Data Analysis Form used for the final tabulation of the results allows for up to three subdivisions in each category.

(See the example form p. 3.14.) These subdivisions should be decided as you plan your study, not when you are tabulating the data. In this way, the specific cause for failure can be recorded directly on the Availability Study Form as the searcher is determining the category. If adding the subdivisions changes the searching procedure outlined above, this procedure should be modified so that the searcher knows exatly what to look for and where to find it.

4. Having completed the study, tabulate and analyze the data from each of the Availability Study Forms on the Availability Analysis Form. The following worked example should make the process relatively clear. (Follow the procedure discussed here step by step on the example form, p. 3.14.) We find that at the completion of the user sampling, we have 500 items listed on the Availability Study Forms. Of these, 240 were immediately available and presumably found by patrons. Of the remaining 260 marked "Can't Find" 41 are undecipherable (DX) and hence not analyzed, 49 are DACQ, 18 are DCAT, 50 are DCIRC, 64 are DLIB, and 38 are DUSER. This is a total of 260 failures, of which 219 are analyzed.

We begin by entering at point (7) on the Analysis Form the 260 and the 219 in the upper right hand corner under "Total Failures" and "Analyzed Failures." Then we enter the analyzed dissatisfactions down column A, "Form Subtotals" (steps 1-5) and the total of analyzed failures (step 6). This should be the same as the number of analyzed failures in the upper right hand corner. Now divide the total failures by the analyzed failures to get the correction factor (1.187 or 1.19). On the bottom left hand corner (step 8) enter the total number of satisfactions and enter it into Box 9 at the bottom of column C. Now multiply each of the form subtotals in Column A (steps 1-5) by the correction factor (1.19) and enter the product in Column B, Corrected Disservice Events, (steps 10-14). What this does is distribute the unanalyzed (DX) items among the five categories in proportion.

Now go to Column C and add items 9 and 10 and place the sum in box 15 (240 + 45.1 = 285.1), add items 15 and 11 (285.1 + 76.0 = 361.1) and put in box 16, add and put items 16 and 12 into box 17, items 17 and 13 into box 18, items 18 and 14 into box 19. The sum in box 19 should equal the total items sought.

Finally, work down Column D (steps 20-24) dividing the number in box 18 by the number in box 19 and putting the quotient in box 20 (441.9 divided by 500.1 = 88.4%), dividing the number in box 17 by the number in box 18 and putting the quotient in box 21, dividing box 16 by box 17 and putting the quotient in box 22, box 15 by box 16 and putting quotient into box 23, and box 9 by box 15 and putting quotient in box 24. This gives the measure of availability (MAV) for each of the performance categories. Or in other words, states as a percentage of 100 the probability that each of the five determinants of availability will provide satisfaction (availability) to patrons. Line 20, for instance, shows that 88.4% of the items sought by a patron in this library will have been acquired; line 22 shows that for every item sought, 85.9 will not be circulating and so on.

To determine the overall MAV, multiply all five measures together (88.4 x 95.2 x 85.9 x 79.0 x 84.2 = 48%). This should be the same as dividing the number of prompt satisfactions by the total number of items sought (240 divided by 500 = 48%).

Analysis of Data. As with all measures, the MAV percentage can only be intepreted in terms of the individual library. An MAV of 48% means that 48 times in a hundred a patron will be able to find a desired item immediately available on the shelf. For a service organization, such a low probability of satisfaction seems too low, yet national studies show that the average MAV is only between 40 and 60 percent for academic libraries.

One of the greatest values of this particular availability measure is that it provides data from which to evaluate the reasons why a library fails to satisfy so many of its patrons. By looking at the failure rates of the specific performance categories measured - acquitions, catalog use, circulation, library malfunctions, and user errors - the library can take corrective measures.

To determine the impact of each of the performance categories on the 52% dissatisfaction rate, divide the number of dissatisfactins in each category by the total number of dissatisfactions. In our worked example, for instance, the DACQ (acquisitions failures) accounts for 22% of the total dissatisfactions (58.2 = 260 - 22.38?); DCAT, 3%; DCIRC, 23%, DLIB, 29%; DUSER, 17%. To correct deficiencies, the best approach is to try to improve the factor accounting for the greatest percentage of the total dissatisfactions, in this instance the DLIB or library malfunctions, until it is no longer the lowest, and then work on the next lowest factor. If you have subdivided any of the categories, these subdvisions may help you to see more clearly some possible areas for further investigation.

Having used the statistical study to isolate the problem, what is needed next is a management analysis of policies, working procedures, facilities, personnel, etc., to discover inconsistencies or bottlenecks that may have grown up in the system that can perhaps be eliminated by new procedures or by following more consistently the old procedures.

As noted previously in reference to other measurement techniques, the important result of measurement is not merely to gather appropriate data, indexes, or other indicators of collection quality or quantity, but to obtain information that will help to improve the collection development program and the ability of collections to meet patron needs. A careful analysis and interpretation of the results of an availability study can produce significant insights into library policies and procedures and result in more effective management decisions.

AVAILABILITY STUDY FORM

3.12

We are studying the availability of books in our library. Please use this form as scratch paper and write the author, title, and call no. for each book you are looking for. If you cannot locate a title in the library, check the "Can't Find" column. Please drop this form at the Exit Control Desk when you leave the library. Thank you.

Author	Title	Call No.	Can't Find	Library Use Only						
				DX	DACQ	DCAT	DUSER	DCIRC	DLIB	# Cop
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										

Availability Study
Searcher Checklist

What to Look For	Where to Look	Failure Category
1. Acquired by library?	Card Catalog	DACQ
2. Incorrect call number on patron sheet	Card Catalog	DCAT
3. Book in special area identified on card catalog	Card Catalog	DUSER
4. Book properly shelved	Shelves	DUSER
5. Book misshelved	Stacks near proper place for call number	DLIB
6. Book in reshelving process	Sorting shelves, loaded book trucks, Circulation Staging Area	
7. Book circulating	Circulation System or Reference desks for Locked Case	DCIRC
8. Book found in area not identified on catalog card	Ask at Reference Desk on respective floor to see if they know whereabouts	DLIB
9. Book in use in house	Yellow shelves near call number area, tables, etc.	DLIB

Other

Note: Do not spend a lot of time trying to locate books that might be in use in the building. But do not assume that all books not checked out or not on the shelves are in use. If no trace of the book can be found, put it in category 10 and code it DLIB.

AVAILABILITY ANALYSIS form

CORRECTION FACTOR ⊗ = (All reported [illegible]

(7) = 260 ÷ 219

= 1.19

Investigator/Analyst: (Kantor)

Dates of study

Service being studied (Sample)

DACQ List any convenient breakdown of D-ACQ

Other collection	21
Not acquired	28

DCAT List any convenient breakdown of D-CAT

Wrong call No	12
Missed in catalog	6

DCIRC List any convenient breakdown of D-CIRC

Checked to Fac.	28
Checked to Student	22
Reserve Library	

DLIB List any convenient breakdown of D-LIB

In Process	26
Unlocatable	38
Fast Cat	

DUSER List any convenient breakdown of D-USER

On Shelf	38
Out of Order on shelf	

SAT List all the prompt satisfactions (8)

240

MULTIPLY EACH SUBTOTAL BY THE CORRECTION FACTOR CALCULATED ABOVE

(A) Form Subtotals	(B) Corrected dis-service events	(C)	(D) NOTE: Divide the lower number by the upper one so the ratio is less than one.
(1) 49	⊗ (14) 58.2 D-ACQ	500.1 sum (19)	(20) ratio 88.4 % MAV ACQ
(2) 18	⊗ (13) 21.4 D-CAT	441.9 sum (18)	(21) ratio 95.2 % MAV-CAT
(3) 50	⊗ (12) 59.4 D-CIRC	420.5 sum (17)	(22) ratio 85.9 % MAV-CIRC
(4) 64	⊗ (11) 76.0 D-LIB	361.1 sum (16)	(23) ratio 79.0 % MAV-LIB
(5) 38	⊗ (10) 45.1 D-USER	285.1 sum (15)	(24) ratio 84.2 % MAV-USER
TOTAL OF ANALYZED FAILURES (6) 219	copy	(9) 240	(25) Enter the product of all five 48.0% MAV

Availability Analysis Worksheet designed for ARL CAP Manual by Tantalus Inc, Cleveland, Ohio.

3.14

AVAILABILITY ANALYSIS

CORRECTION FACTOR ⊗ = (All reported failures)/(Analyzed Failures)

(7) = ______ ÷ ______

= ______

DACQ List any convenient breakdown of D-ACQ

______ ______

______ ______

______ ______

DCAT List any convenient breakdown of D-CAT

______ ______

______ ______

______ ______

DCIRC List any convenient breakdown of D-CIRC

______ ______

______ ______

______ ______

DLIB List any convenient breakdown of D-LIB

______ ______

______ ______

______ ______

DUSER List any convenient breakdown of D-USER

______ ______

______ ______

______ ______

SAT List all the prompt satisfactions (8)

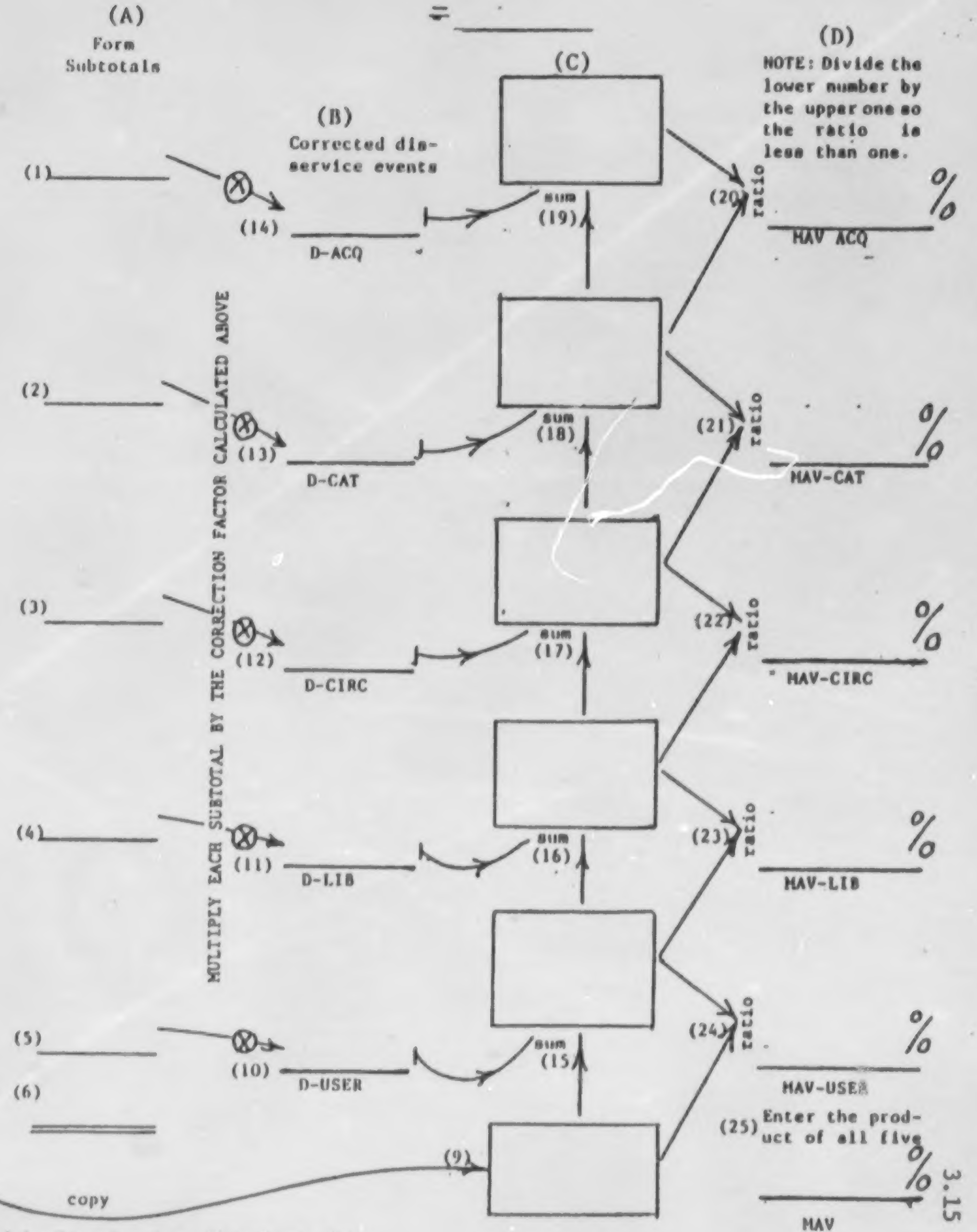
______

TOTAL OF ANALYZED FAILURES

Investigator/Analyst:

Dates of study

Service being studied


(A)
Form Subtotals
(1)
(2)
(3)
(4)
(5)
(6)
MULTIPLY EACH SUBTOTAL BY THE CORRECTION FACTOR CALCULATED ABOVE
(B)
Corrected dis-service events
(14) D-ACQ
(13) D-CAT
(12) D-CIRC
(11) D-LIB
(10) D-USER
(C)
sum (19)
sum (18)
sum (17)
sum (16)
sum (15)
(9)
copy
(D)
NOTE: Divide the lower number by the upper one so the ratio is less than one.
(20) ratio % MAV ACQ
(21) ratio % MAV-CAT
(22) ratio % MAV-CIRC
(23) ratio % MAV-LIB
(24) ratio % MAV-USER
(25) Enter the product of all five % MAV

Availability Analysis Worksheet designed for ARL CAP Manual by Tantulus Inc, Cleveland, Ohio.

Accessibility Measures

The accessibility of library materials and services to patrons is contingent on the amount of time required for the patron to obtain what he needs. Library services involve both effort time (the time required for the patron or librarian to perform a task, such as finding a call number in the catalog, locating the book on the shelf, and checking it out at circulation) and delay time (the waiting time required for a task to be performed, such as sending off an ILL request, waiting for mail delivery, notifying the patron, and waiting for him to pick up the item). Since these times may range from a few minutes to months, a gross average, such as that determined through the Document Delivery Test Capability Index, does not provide sufficient specific data on which to take corrective action to improve the accessibility.

Kantor (5) suggests some techniques that can give the evaluator more specific information on the time required for a library to provide specific services or perform specific functions that may be slowing down the access of patrons to library collections.

Measurement of Effort by Simulation (MAC-SIM).

Studying the effort required in some access activity can be done through simulation, duplicating the activity a few dozen times and averaging the time required. For example, we can study catalog use by simulating the activities of patrons in using the catalog, finding the desired items on the shelf, and checking them out at circulation.

Procedure.

The procedure for such a simulation is simple, requiring a simulator and a method for recording the time. A stop watch is also helpful in measuring the steps accurately. Using an untrained student assistant can more nearly approximate the typical library patron, although in some instances an experienced professional may be able to detect unnecessary steps in the procedure that are increasing the time required and reducing the accessibility. The time can be recorded on a sheet using the following categories:

No. of Trials	Step 1	Step 2	Step 3	Step 4

A card catalog use simulation would be recorded and analyzed as follows:

No. of Simulations	At Catalog	To Get Book	To Check Out
1	1:30	4:15	2:20
2	:55	2:30	1:30
Tot. 2	2:25	6:45	3:50
Ave.	1:13	3:23	1:75

After a sufficient number of trials, each column is totaled and an average taken.

Similar studies can be done of the effort required to obtain items through ILL or circulation recall, or to evaluate the time required for technical processes, weeding, reclassifying, etc. The items used for simulation studies can be taken from the dissatisfactions obtained from the availability study explained earlier, from the shelflist, from requests for specific services, from items received in the acquisitions process, etc.

Analysis of the Data. Simulation studies such as this show how much effort time is required to perform a given library task and can help the library detect bottlenecks or unnecessarily long procedures that may be slowing down or frustrating user access to materials and services. When used with other utilization studies they can often provide the basis for making needed changes in library policies, procedures, physical arrangements, etc.

Measurement of Access Delay (MAC-DEL). To measure the access delay time in providing patron services or in performing other library processes, Kantor (5) suggests using flow analysis, which postulates that the events in the processes used by a library to deliver patron services are like the flow in a pipeline. The delay time from request to delivery (Measurement of Accessibility determined by ability to deliver services, MAC-DEL) can be measured by determining the number of requests in process and dividing this by the rate of handling the requests:

$$\text{MAC-DEL} = \frac{\text{Number of requests pending}}{\text{Handling rate (requests per day)}}$$

For practical purposes, the handling rate is taken to be the average between the number of requests received per day and the number of items delivered to patrons per day.

This technique, with some modifications, can be used to estimate the delays associated with any library process with a fairly steady level of use, not only in public services but in technical processing procedures as well.

The worked example, p. 3.19, shows this technique applied in a ten-day study to a hypothetical ILL service. On each day of the study, the number of requests received is entered in col. 2, and the number of items picked up by patrons is entered into the last column. At the end of each day, the number of items still pending in each of the four steps of the process is determined and entered into the appropriate pending column. At the end of the ten days, the data is analyzed as follows:

1. Total each column.
2. Calculate the average of each column.
3. Transfer the averages of the "requests received" column (E) and the "Delivered" column (L) to the rate factor calculation boxes in the upper right hand corner.

4. Add these two numbers (E and L) and divide 2 by this sum.

5. Put the rate factor thus calculated into the Rate Factor box. This factor is used to convert the pending column averages to "working days of delay."

6. At the bottom of the sheet, multiply each column average by the rate factor and then total. This computes to 9.2 working days of delay. By looking at the average delay times for each of the pending categories, you can determine the greatest causes for the delay. In this example, more than half the delay is beyond the library's control (5.2 days in transit and 1.5 days waiting to be picked up).

Procedure.

1. Determine the library service or process to be studied, the specific objective to be achieved by the study, and how long the study will run.

2. Prepare the Delay Analysis Form (p. 3.20) by writing in the dates for the study in the first column and the steps in the process in the pending columns. Provide tally sheets or counters on which to count each day's requests or transactions and train all personnel in the purposes and procedures for the study.

3. At the end of each day, fill out the appropriate information on the Data Analysis Form, and at the end of the study analyze the results using the process explained above.

Analysis of the Data. The interpretation of the data depends on the purpose of the study, but the general purpose of this accessibility measurement is to discover the length of delay time in providing or delivering services. If the delays seem too long for satisfactory service, you may be able to recommend changes to the library administration that would improve the service. If you find that the delays are largely beyond the control of the library, you will at least have data on which to explain inordinate delays.

DELAY ANALYSIS

(Sample)
Service studied

Dates of study
(Kanter)
Investigator

TIME PERIOD	NUMBER OF REQUESTS RECEIVED	Pending in To Send	Pending in Mails	Pending in Notify	Pending in Pick-up	Pending in	Total Pending	NUMBER OF ITEMS DELIVERED
7/31/78	18	20	80	20	20		140	12
8/1	16	16	85	19	26		146	10
8/2	9	23	91	18	22		154	1
8/3	14	14	88	23	30		155	13
8/4	17	21	81	28	33		163	9
8/7	23	15	83	31	25		154	32
8/8	16	18	76	20	23		137	33
8/9	15	22	78	15	24		139	13
8/10	12	22	85	18	21		146	5
8/11	16	16	72	20	19		127	35
COLUMN TOTALS (1)	156	187	819	212	243		1461	163
COLUMN AVERAGES (2)	15.6 (E)	18.7	81.9	21.2	24.3		146.1	16.3 (L)

MULTIPLY EACH COLUMN AVERAGE BY THE RATE FACTOR

(6) AVERAGE DELAY PER PHASE	1.2	15.2	1.3	1.5		9.2	days

TOTAL DEL

(3) RATE FACTOR CALCULATION

$\boxed{15.6}$ (E) $\boxed{16.3}$ (L)

(4) sum

$2 \div \boxed{31.9} = $

(5) $\boxed{0.063 \text{ day}}$

RATE FACTOR

The rate factor is the delay per item pending.

3.19

DELAY ANALYSIS

TIME PERIOD	NUMBER OF REQUESTS RECEIVED	Pending in	Pending in	Pending in	Pending in	Pending in	Total Pending	NUMBER OF ITEMS DELIVERED
COLUMN TOTALS (1)								
COLUMN AVERAGES (2)	(E)							(L)

MULTIPLY EACH COLUMN AVERAGE BY THE RATE FACTOR

(6) AVERAGE DELAY PER PHASE						TOTAL DEL.

Service studied ______

Dates of study ______

Investigator ______

(3) RATE FACTOR CALCULATION

☐ (E) ☐ (L)

(4) sum

2 ÷ ☐ =

(5) ☐ RATE FACTOR

The rate factor is the de
per item pending.

USER SURVEYS

Burns points out that public service agencies such as libraries need continuous feedback from their users lest they lose touch with the realities of their existence, and one good way to obtain this feedback is the user survey. Users may be surveyed on a number of concerns—their needs for various types of materials and services, their perceptions of how well the library is meeting their needs, and their ideas on how the library can improve its services, collections, and policies.

Before deciding what and how to survey, the assessor should first of all answer the question—why? Do you really need to know what your patrons think? And what specifically do you want your users to tell you about? Designing a brief, unambiguous survey instrument is not easy; nor is the validating, the administration, the tabulating, or analyzing the result always a simple matter. And since too-frequent surveys may become a nuisance to patrons, creating antagonism rather than eliciting useful information, deciding on whether to conduct a survey should be considered carefully with the Assistant Collection Development librarian. General user surveys for the entire library similar to the McKay Institute Survey of 1977 will be left to the library administration to conduct on a somewhat regular basis.

Advantages and Disadvantages.

Surveys have some distinct disadvantages: (1) a plethora of surveys by various librarians may poison the well and make patron surveys not only inaccurate but impossible; (2) users are often passive, inconsistent, and uncooperative; (3) the poorly based opinions of ill-informed users may count just as much as those of well-informed and experienced users; (4) and some parts of the collection may be ignored for a lack of subject expertise among users. In spite of these weaknesses, however, carefully planned and executed surveys can help the library (1) identify levels and kinds of user needs; (2) reflect changing interest and trends; (3) make use of the knowledge and expertise of faculty and researchers; (4) be related directly to the goals and objectives of the library, (5) reach most of the library's users either in general surveys or in surveys of particular user groups; and (6) if the same questions are repeated in subsequent surveys, responses may be compared over time to show changing attitudes and trends.

The surveys discussed here suggest themselves as appropriate for assessors to consider as part of an assessment of a specific collection rather than general surveys. They can help the librarian determine levels of need and satisfaction, suggest changing trends for making collection policy statements more indicative of perceived needs of patrons, suggest areas of weaknesses and strengths in collections and services, and provide information as to the ability and willingness of patrons to utilize materials being acquired, i.e. microforms, foreign language publications, etc.

Since developing a statistically valid and reliable survey instrument and methodology requires a certain amount of sophisticated expertise, the surveys suggested here have been developed as part of either the McKay Institute Survey or the CAP study and have been applied successfully. With proper attention to the logical requirements of sampling, these instruments and modifications of them can be used to provide useful information for collection assessments. A useful reference tool for the librarian contemplating a user survey is Line's Library Surveys: An Introduction to their use, planning, procedure and presentation (9).

Recommended Surveys.

1. The McKay Survey Questionnaires administered to the English, Chemistry, and Latin American Studies faculty (see pp. 3.25, 3.29, 3.32) can be adapted by assessors for use with other departments. These surveys covered a broad range of questions about user behavior and collection adequacy. Question 3, the comparison of BYU with other libraries, elicited ambiguous results and could well be eliminated, since it doesn't really tell us much anyway. Other questions could be added, such as respondent proficiency in foreign languages and their opinion as to the importance of foreign language materials in their programs, to make the instrument more complete.

2. The Faculty Research Survey instrument (see p. 3.38) used in the CAP study could be used to obtain information about the areas of specialization among the faculty, an indication of current and future research projects, and how adequate they perceive library collections to be to support that research. Used appropriately, such a survey could help the librarian consider possible changes in collection needs.

3. The Graduate Student Research Survey (p. 3.39) is similar to the faculty survey but recognizes the need to support graduate research as well as faculty.

4. The Needs Survey (p. 3.40) sent to academic department chairmen during the CAP study can be helpful in keeping up with anticipated changes in curriculum and research programs of academic departments and in obtaining their perceptions of the adequacy of library collections to support their major programs. Since it asks for five year projections, it should probably not be used more often than every five years with a given department. (Data from all academic departments was obtained in 1979 during the CAP study and is available to assessors.)

5. The ARL CAP Importance/Success survey (pp. 3.42) is also a useful instrument for gathering data about patron needs and their perceptions of library satisfaction of those needs. The MIT survey (p. 3.46) is a variation of the importance/success survey and shows how the survey instruments discussed here can be modified or combined to achieve particular assessment needs.

6. The Faculty Periodicals Survey (p. 3.49) was developed for the BYU CAP study and used with use studies and other measures to assess the education periodicals collection.

7. The Faculty Interview (p. 3.50) was used successfully in the CAP study to assess faculty perceptions of various library services. At the end of the interview, the McKay Institute Survey form was left for faculty members to complete and return. The two instruments together provided significant user information.

8. The Student User Survey (p. 3.56) is a brief survey instrument that can be used to obtain some indication of student reactions to the library. It can be handed to students as they leave the main floor of the library on given days and returned at the exits as students leave, or can be used in an exit interview.

These examples do not exhaust the possibilities that selectors can use for user surveys. But most have been tried successfully at BYU or other libraries and present no great problems in application or analysis. Assessors will, of course, need to plan the survey carefully with clear-cut objectives explicitly stated and with full awareness of potential pitfalls if the survey is to be worthwhile. No one instrument illustrated here may be adequate and all may need some modifications. Bonn (1) comments on several user surveys done at other libraries that may suggest additional ideas.

Procedure.

1. Establish the purpose and objectives to be achieved by the survey.

2. Determine the kind of survey to be conducted--sampling, complete population study—the user group(s) to be included—faculty, graduate students, undergraduates—the method(s) to be used to gather data—interview, mailed questionnaire, questionnaire distributed to users in the library. In selecting the population to be surveyed, don't overlook any cross-disciplinary interests in the collection being assessed and include all departments interested in the collection. The organic chemistry collection, for instance, is used by several departments, not just Chemistry.

3. Develop an instrument for the interview or the survey. See Line (9) for a helpful discussion if you would need more direction.

4. Obtain names, addresses, and phone numbers of faculty or graduate students from appropriate academic departments. When doing a sampling survey, use random number tables to assure a random sample. You may also need to consider a stratified sample. (See "Introduction" to the McKay Survey Report for an example.)

5. Schedule appointments or prepare questionnaires for distribution. It is a good idea to prepare a brief letter to send with the questionnaire, explaining the reason for the survey, its importance, and the date by which it should be returned. Be sure to

include an envelope or prepare the questionnaire for easy return in a campus envelope by writing the return address where it will appear in the address window after folding.

6. Follow up, if necessary, with calls or an additional letter if the questionnaires have not been returned when due.

7. For questionnaires being handed out in the library to students or for exit interviews, plan the number of people needed and train them adequately to interview or hand out the questionnaires with all necessary entrances or exits to the area being studied covered at all times during the study period.

8. Tabulate and analyze the results. A blank copy of the form can be used for this purpose. Line (9) discusses the use of tables, charts, etc. for effectively displaying the survey results.

Analyzing the Results.

The McKay Institute survey report of the BYU Library is a good example of an interpretation of survey results and could be used to get some ideas. Generally, you report the data by using tables, charts, or graphs, and determine on the basis of the Collection Policy Statements or other performance standards the significance of the data. As Line (9, p. 98) points out, we could just give all the figures in a mass and let the reader interpret them as he is inclined, but "the investigator is under an obligation to interpret his results, drawing attention to especially striking findings, offering explanations for surprising figures, coming to conclusions and possibly making recommendations. In doing so, he must combine imagination with common sense and a good deal of caution, giving opportunity for all to check his interpretations against the actual figures, and knowing at the same time that some will read only the commentary."

The McKay Institute survey report, Chapter 7, or the Collection Analysis Project Final Report, and many of the articles included in Appendix E provide examples of how to interpret and present the survey results.

ENGLISH COLLECTION

1. How many times per week do you usually use the English collection in the Library? (check one only)

   a. ___ Never (if you checked this response, please skip to question 14 of this survey)
   b. ___ Less than once per week
   c. ___ 1-2 times per week
   d. ___ 3-4 times per week
   e. ___ 5-6 times per week
   f. ___ 7 or more times per week

2. How many hours per week do you spend using the English collection? (check one only)

   a. ___ Less than 2 hours
   b. ___ 2-5 hours
   c. ___ 6-10 hours
   d. ___ 11-15 hours
   e. ___ More than 15 hours

3. If you have ever used an English collection at any college or university library other than BYU's, please respond to this question:

   How well does the English collection in the Harold B. Lee Library compare with those other libraries? Please write the name and location of each library on the slanted line, and the rating in the appropriate box. 1 = much poorer; 2 = poorer; 3 = about the same; 4 = better; 5 = much better.

Name and location of libraries

a. Primary sources (novels, plays, etc.)						
b. Secondary sources (criticism, etc.)						
c. Journals and other serials						
d. Manuscripts						

4. How often do you use the English collection for each of the following activities? (Please respond to all items by circling the appropriate number) 3.26

	Rarely or Never	Sometimes	Often
a. To keep up in my field	1	2	3
b. To prepare for class	1	2	3
c. To do research	1	2	3
d. To use journals	1	2	3
e. To have students do research for me	1	2	3
f. To use manuscripts	1	2	3
g. To use primary sources (novels, poetry, etc)	1	2	3
h. To use secondary sources (criticism, etc.)	1	2	3

5. How adequate is the English collection in each of the following areas? (please circle)

	Inadequate	Poor	Fair	Good	Excellent
a. Current books	1	2	3	4	5
b. Books more than 10 years old	1	2	3	4	5
c. Current journals	1	2	3	4	5
d. Journals more than 10 years old	1	2	3	4	5
e. Manuscripts	1	2	3	4	5
f. Indexes, bibliographies, reference books	1	2	3	4	5

6. How good should the English collection be in each of these areas to meet your needs adequately? (please circle)

	Very poor	Poor	Fair	Good	Excellent
a. Current books	1	2	3	4	5
b. Books more than 10 years old	1	2	3	4	5
c. Current journals	1	2	3	4	5
d. Journals more than 10 years old	1	2	3	4	5
e. Manuscripts	1	2	3	4	5
f. Indexes, bibliographies, reference books	1	2	3	4	5

7. How often do you find yourself having to go to another library or using interlibrary loan because the Harold B. Lee Library's English collection does not have what you need? (please circle)

Rarely or Never	Sometimes	Often
1	2	3

8. a. Are you satisfied with the acquisitions and processing of materials for the English collection? (check one only)

___Usually satisfied ___Occasionally not satisfied ___Usually not satisfied

b. How easy is it to get materials ordered? (please circle)

Hard to Order		Easy to Order
1	2	3

3.27

c. Do you personally participate in the library material selection process in your department? ___ Yes ___No

d. How often are you refused the purchase of what you feel to be needed library materials for the English collection? (please circle)

Rarely or Never	Sometimes	Often
1	2	3

e. How soon are you notified when the materials you have special ordered are received? (please circle)

Not notified	Slowly	Fair	Quickly
1	2	3	4

f. Is the present "book list" method of listing new acquisitions an adequate way of informing you about new books?

___ Yes ___ No If no, can you recommend a better method?

g. What specific problems have you encountered with acquisitions that are not covered above?

9. If you had control of the budget for the English collection, how would you allocate it? (Give a percentage in the space provided)

a. ___ Current boods
b. ___ Current journals
c. ___ Retrospective books
d. ___ Retrospective journals
e. ___ Indexes, bibliographies and reference books
f. ___ Non-print media
g. ___ Other ____________________
____

10. How adequate is the English collection for each of the following?

	Inadequate	Poor	Fair	Good	Excellent
a. Undergraduates	1	2	3	4	5
b. Masters Candidates	1	2	3	4	5
c. Ph.D. Candidates	1	2	3	4	5
d. Faculty	1	2	3	4	5

11. How would you rate the English collection for: (please circle)

	Very poor	Poor	Fair	Good	Excellent
a. Instructional purposes	1	2	3	4	5
b. Research purposes	1	2	3	4	5

12. Which of the following present problems to you with the English collection? (check all that apply)

a. ___ Not enough journals
b. ___ Not enough books
c. ___ Time lag between ordering and receiving
d. ___ Misfiled books and/or journals
e. ___ Lost books and/or journals
f. ___ Spread out on different levels of the Library
g. ___ Journals gone too long for binding
h. ___ Ease of locating and obtaining books, journals, etc.
i. ___ Service at the Humanities Reference Desk
j. ___ Insufficient copies of individual titles
k. ___ Other (please explain):

13. Please list any suggestions you may have for improving the English collection.

14. How many years have you taught at BYU? (check one only)

a. ___ Less than 2 years
b. ___ 2 - 5 years
c. ___ 5 - 10 years
d. ___ More than 10 years

THE CHEMISTRY COLLECTION

1. How many times per week do you usually use the Chemistry Collection in the library? (Circle one only)

   a. Never
   b. Less than once per week
   c. 1-2 times per week
   d. 3-4 times per week
   e. 5-6 times per week
   f. 7 or more times per week

2. How many hours per week do you spend using the Chemistry Collection? (Circle one only)

   a. Less than 2 hours
   b. 2-5 hours
   c. 6-10 hours
   d. 11-15 hours
   e. More than 15 hours

3. If you have ever used a Chemistry Collection at any college or university library other than BYU's, please respond to this question:

   How well does the Chemistry Collection in the Harold B. Lee Library compare with those of other libraries?
   1 = BYU much poorer
   2 = BYU poorer
   3 = BYU about the same
   4 = BYU better
   5 = BYU much better

   Please answer for both "Books" and "Journals" below placing a number for each college collection you have used.

Name of College or University	Books	Journals
1. Arizona State University		
2. Cal Tech		
3. Colorado State University		
4. Harvard University		
5. Indiana University		
6. Iowa State University		
7. MIT		
8. New Mexico Highlands University		
9. Oregon State University		
10. Stanford		
11. University of Calgary, Canada		
12. University of California, Berkeley		
13. University of California, Davis		
14. University of California, Irvine		
15. University of California, Los Angeles		
16. University of Cincinnati		
17. University of Illinois		

Name of College or University	Books	Journals
18. University of Lethbridge, Canada		
19. University of Liege, Belgium		
20. University of New Mexico		
21. University of Rochester, New York		
22. University of Utah		
23. University of Virginia		
24. University of Washington, Seattle		
25. Utah State University		
26. Vanderbilt University		
27. Washington University, St. Louis		
28. Wesleyan University, Connecticut		

4. How often do you use the Chemistry Collection for each of the following activities? (Please check the appropriate answers, a-f)

	Rarely or Never	Sometimes	Often	No Response
a. To keep up in my field				
b. To prepare for class				
c. To do research				
d. To use journals				
e. To have students do research for me				
f. To use annual reviews				

5. How adequate is the Chemistry Collection in each of the following areas? (Please check, a-g)

	Inadequate	Poor	Fair	Good	Excellent
a. Current books					
b. Books more than 10 years old					
c. Current journals					
d. Journals more than 10 years old					
e. Manuscripts					
f. Annual reviews					
g. Indexes, bibliographies, reference books					

6. How good should the Chemistry Collection be in each of these areas to meet your needs adequately? (Please check, a-g)

	Very Poor	Poor	Fair	Good	Excellent
a. Current books					
b. Books more than 10 years old					
c. Current journals					

	Very Poor	Poor	Fair	Good	Excellent
d. Journals more than 10 years old					
e. Manuscripts					
f. Annual reviews					
g. Indexes, bibliographies, reference books					

7. How often do you find yourself having to go to another library or using interlibrary loan because the Harold B. Lee Library's Chemistry Collection does not have what you need? (Please circle one)

   A. Rarely or never
   b. Sometimes
   c. Often

8. How do you react to and participate in the acquisitions and processing of materials for your collection? (Please circle, a-f)

   a. Are you satisfied with the acquisitions and processing of materials for the Chemistry Collection?

      Usually satisfied
      Occasionally not satisfied
      Usually not satisfied

   b. How easy is it to get materials ordered?

      Hard to order
      Easy to order

   c. Do you personally participate in the library material selection process in your department?

      Yes
      No

   d. How often are you refused the purchase of what you feel to be needed library materials for the Chemistry Collection?

      Rarely or Never
      Sometimes
      Often

   e. How soon are you notified when the materials you have special ordered are received?

      Not notified
      Slowly
      Fair
      Quickly

f. Is the present "book list" method of listing new acquisitions an adequate way of informing you about new books?

Yes
No

If no, can you recommend a better method? ______________________________

____

____

____

9. If you had control of the budget for the Chemistry Collection, how would you allocate it? (Please assign a percentage to each item, a-f)

a. Current books ______
b. Current journals ______
c. Retrospective books ______
d. Retrospective journals ______
e. Indexes, bibliographies, and reference books ______
f. Non-print methods ______

10. How adequate is the Chemistry Collection for each of the following: (Please check. a-d)

	Inadequate	Poor	Fair	Good	Excellent
a. Undergraduates					
b. Master's candidates					
c. Ph.D. candidates					
d. Faculty					

11. How would you rate the Chemistry Collection for: (Please check. a-b)

	Very Poor	Poor	Fair	Good	Excellent
a. Instructional purposes					
b. Research purposes					

12. Which of the following present problems to you with the Chemistry Collection? (Check all that Apply)

a. Not enough journals
b. Not enough books
c. Time lag between ordering and receiving
d. Misfiled books and/or journals
e. Lost books and/or journals

f. Spread out of different levels of the library
g. Journals gone too long for binding
h. Ease of locating and obtaining books, journals, etc.
i. Service at the Science Reference Desk
j. Insufficient copies of individual titles
k. Other: ______________________________

13. Please list any suggestions you may have for improving the Chemistry Collection.

____

____

____

____

____

LATIN AMERICAN COLLECTION

1. How many times per week do you usually use Latin American books, journals, etc. in the Library? (check one only)

   a. ___ Never (if you checked this response, please skip to Question 14 of this survey)
   b. ___ Less than once per week
   c. ___ 1-2 times per week
   d. ___ 3-4 times per week
   e. ___ 5-6 times per week
   f. ___ 7 or more times per week

2. How many hours per week do you usually spend using the Latin American materials? (check one only)

   a. ___ Less than 2 hours
   b. ___ 2-5 hours
   c. ___ 6-10 hours
   d. ___ 11-15 hours
   e. ___ More than 15 hours

3. If you have ever used a Latin American collection at any college or university Library other than BYU's, please respond to this question:

   How well does the Latin American collection in the Harold B. Lee Library compare with those other libraries? Please write the name and location of each Library on the slanted line, and the rating in the appropriate box. 1 = much poorer; 2 = poorer; 3 = about the same; 4 = better; 5 = much better.

	Name and Location of Libraries						
a. Books							
b. Journals and other serials							
c. Manuscripts							

3.35

4. How often do you use the Latin American materials for each of the following activities? (Please respond to all items by circling the appropriate number)

	Rarely or Never	Sometimes	Often
a. To keep up in my field	1	2	3
b. To prepare for class	1	2	3
c. To do research	1	2	3
d. To use journals	1	2	3
e. To have students do research for me	1	2	3
f. To use manuscripts	1	2	3

5. How adequate is the Latin American collection in each of the following areas? Please rate each area separately, once for the English language and once for the Spanish language. Rate each area by placing the appropriate number in each box. The following criteria are to be used: 1 = inadequate; 2 = poor; 3 = fair; 4 = good; 5 = excellent

	English Language	Spanish Language
a. Current books		
b. Books more than 10 years old		
c. Current journals		
d. Journals more than 10 years old		
e. Manuscripts		
f. Annual reviews		
g. Indexes, bibliographies and reference books		

6. How good should the Latin American collection be in each of these areas to adequately meet your needs? Please rate each area separately, once for the English language and once for the Spanish language. Rate each area by placing the appropriate number in each box. The following criterion are to be used: 1 = very poor; 2 = poor; 3 = fair; 4 = good; 5 = excellent.

	English Language	Spanish Language
a. Current books		
b. Books more than 10 years old		
c. Current journals		
d. Journals more than 10 years old		
e. Manuscripts		
f. Annual reviews		
g. Indexes, bibliographies and reference books		

7. How often do you find yourself having to go to another library or using interlibrary loan because the Harold B. Lee Library's Latin American collection does not have what you need? (please circle) 3.36

Rarely or Never   Sometimes   Often

1   2   3

8. a. Are you satisfied with the acquisitions and processing of materials for the Latin American collection? (check one only)

___ Usually satisfied   ___ Occasionally not satisfied   ___ Usually not satisfied

b. How easy is it to get material ordered? (please circle)

Hard to order   Easy to order

1   2   3

c. Do you personally participate in the Library Selection process for Latin American materials?   ___ Yes   ___ No

d. How often are you refused the purchase of what you feel to be needed library materials for the Latin American collection? (please circle)

Rarely or never   Sometimes   Often

1   2   3

e. How soon are you notified when the materials you have special ordered are received? (please circle)

Not notified   Slowly   Fair   Quickly

1   2   3   4

f. Is the present "book list" method of listing new acquisitions an adequate way of informing you about new books?

___ Yes   ___ No   If no, can you recommend a better method?

g. What specific problems have you encountered with acquisitions that are not covered above?

9. If you had control of the budget for the latin American collection, how would you allocate it? (Give a percentage in the space provided)

a. ___ Current books
b. ___ Current journals
c. ___ Retrospective books
d. ___ Retrospective journals
e. ___ Indexes, bibliographies, and reference books
f. ___ Non-print media
g. ___ Other ____________________

____

3.37

10. How adequate is the Latin American collection for each of the following? (please circle).

	Inadequate	Poor	Fair	Good	Excellent
a. Undergraduate	1	2	3	4	5
b. Masters Candidates	1	2	3	4	5
c. Ph. D. Candidates	1	2	3	4	5
d. Faculty	1	2	3	4	5

11. How would you rate the Latin American collection for: (please circle)

	Very poor	Poor	Fair	Good	Excellent
a. Instructional purposes	1	2	3	4	5
b. Research purposes	1	2	3	4	5

12. Which of the following present problems to you with the Latin American collection? (check all that apply)

a. ___ Not enough journals
b. ___ Not enough books
c. ___ Time lag between ordering and receiving
d. ___ Misfiled books and/or journals
e. ___ Lost books and/or journals
f. ___ Spread out on different levels of the Library
g. ___ Journals gone too long to the bindery
h. ___ Service at the reference desks
i. ___ Ease of locating and obtaining books, journals, etc.
j. ___ Insufficient copies of individual titles
k. ___ Other (please explain):

13. Please list any suggestions you may have for improving the Latin American collection:

14. How many years have you taught at BYU? (check one only)

a. ___ Less than 2 years
b. ___ 2-5 years
c. ___ 5-10 years
d. ___ More than 10 years

FACULTY RESEARCH SURVEY

Name ______________________

Department ________________

AREAS OF RESEARCH

1. What are your areas of specialization? ____________________

2. What are your current areas of research interests or activities? ______

3. What future research projects are you anticipating that would involve library materials? ____________________

COLLECTION ASSESSMENT

1. How adequate do you find the library collections in your areas of specialization? ____________________

2. What deficiencies are you aware of in the library collections or services that support your research? ____________________

GRADUATE STUDENT LIBRARY RESEARCH SURVEY

NAME ______________________________

MAJOR ______________________________

LEVEL OF
GRADUATE STUDY ______________________

GRADUATE STUDENT LIBRARY RESEARCH SURVEY

AREAS OF RESEARCH

1. What are your areas of specialization? ______________________________

2. What are your current areas of research interests or activities?
   a. Course work ______________________________
   b. Thesis or Dissertation ______________________________

COLLECTION ASSESSMENT

1. How adequate do you find the library collections in your areas of specialization?

2. What deficiencies are you aware of in the library collections or services that support your research? ______________________________

NEEDS SURVEY OF MAJOR ACADEMIC UNITS

College: ____

I. Please indicate anticipated changes in your college's instructional program during the next five years (e.g., significant enrollment shifts; new courses or degree programs; discontinued courses or degree programs; etc.).

II. Please indicate any major anticipated changes in your college's research programs during the next five years (e.g., shifts in emphasis in current research activities; new research programs, discontinued or completed programs; etc.).

III. We would like a general idea of your view of the adequacy of the library's collections in supporting your college's major programs. (Please circle appropriate number in each scale)

A. Adequacy of collection in support of college's Instructional Program.

1 2 3 4 5 6 7 8 9 10

10=Entirely adequate; 1=Entirely inadequate

B. Adequacy of collection in support of college's Research Programs.

1 2 3 4 5 6 7 8 9 10

10=Entirely adequate; 1=Entirely inadequate

C. Please provide additional comment regarding the above rating if you so desire.

IV. In future phases of this study, we will be conducting detailed interviews with selected faculty on the adequacy of the library's collections. Who in your college would you recommend for this type of interview in terms of knowledge of and interest in the library's collections program?

ASSOCIATION OF RESEARCH LIBRARIES

OFFICE OF UNIVERSITY LIBRARY MANAGEMENT STUDIES

CAP Manual
Chapter 8: Appendix
Draft

IMPORTANCE/SUCCESS SURVEY

The library is seeking to answer two questions. First, we would like to know what type of library collections needs are most important to your work. We realize that different groups and individuals have different needs and we want to focus on what library users consider most important. You can help us by distinguishing those needs which are most important from those which are less important. Second, we would like to determine how well the library is presently meeting your needs.

You are asked to provide two answers to each of the questions appearing below. Answer in the following manner: (1) indicate how important the need is to you by placing the letter "I" in the box which best indicates that importance; (2) indicate how successful the library has been in providing for that need by placing the letter "S" in the box which best indicates that success.

"I" = Importance   "S" = Success

Example:

Need for foreign dissertations (min) / / / I / S / / (max)

Need for reports on microfiche (min) / / / / I,S/ / (max)

Need for local newspapers (min) / S / I / / / / (max)

1. The need to consult or borrow the following types of material:
    - a. Handbooks and Encyclopedias . . . . (min) / / / / / / / (max)
    - b. Indexes to journals and periodicals. (min) / / / / / / / (max)
    - c. Books . . . . (min) / / / / / / / (max)
    - d. Professional society publishers . . (min) / / / / / / / (max)
    - e. Technical Reports . . . . (min) / / / / / / / (max)
    - f. U.S. Government Documents . . . . . (min) / / / / / / / (max)

1527
New Hampshire
Avenue, N. W.
Washington, D. C. 20036
(202) 232-8656

g. Scholarly journals . . . . (min) / / / / / / (max)

h. Trade journals . . . . (min) / / / / / / (max)

i. General interest materials . . . . (min) / / / / / / (max)
(e.g. novels, local newspapers,
news magazines, etc.)

j. Microfilms and microfiche . . . . . (min) / / / / / / (max)

k. Other (specify) ________________ (min) / / / / / / (max)

2. The need to consult or borrow material in the following languages:

a. English . . . . . (min) / / / / / / (max)

b. Romance languages (e.g. French, Italian, Spanish, Portuguese) . (min) / / / / / / (max)

c. Germanic (e.g. German, Dutch, Swedish, Danish) . . . (min) / / / / / / (max)

d. Slavic (e.g. Czech, Russian, Polish) . . . . . (min) / / / / / / (max)

e. Oriental (e.g. Chinese, Japanese) (min) / / / / / / (max)

f. Arabic . . . . . (min) / / / / / / (max)

g. Other (specify) _____________. (min) / / / / / / (max)

3. The need to consult or borrow material published within the following time frame:

a. Published in the last 5 years . (min) / / / / / / (max)

b. Published prior to 5 years ago . (min) / / / / / / (max)

4. The need to consult or borrow material for the following purposes:

a. For course purposes (assigned reading, recommended course reading) . . . . . (min) / / / / / / (max)

b. For academic research (publication, dissertation, course research) . . . . . (min) / / / / / / (max)

c. For sponsored research (grant or contract supported research) . (min) / / / / / / (max)

d. For general interest or recreation . . . . . . (min) / / / / / / (max)

e. Other (specify) ____________. (min) / / / / / / (max)

5. Because the libraries cannot have all published material available in their collections, cooperative programs are maintained with other libraries so that materials can be borrowed from them or, in some instances, our users can use these materials at these other libraries.

a. How important are these cooperative services to you?

(min) / / / / / / (max)

b. How successful is the library in making you aware of these services?

(min) / / / / / / (max)

6. a. How important is your need to actively influence the library's selection of library materials? (e.g. books, journals, etc.)

(min) / / / / / / (max)

b. How successful is the library in providing the opportunity to influence the library's selection of materials?

(min) / / / / / / (max)

The following information will help the library determine the relative success of the various parts of its collection program.

Your Status:

Faculty_____________ Master's Degree Candidate__________

Research Staff__________ Doctoral Degree Candidate__________

Undergraduate___________ Other ______________________________

Your general area(s) of interest:

Humanities_______________ Social Sciences_______________

Engineering______________ Sciences______________________

Art & Architecture______ Other (specify)_______________

Using the scale below, please indicate the frequency with which you use the MIT Libraries.

1 = more than once a week; 2 = once or twice a month;

3 = a few times each semester; 4 = once or twice a year;

5 = never

_____Humanities Library _____Social Sciences Library

_____Science Library _____Engineering Library

_____Fine Arts Library

Name (optional) _______________________________

JOB	RESPONSE	LIBRARY
1 - 3 ☐☐☐	4 - 6 ☐☐☐	3.46 7 ☐

The Libraries
Massachusetts Institute of Technology
Cambridge, Massachusetts, 02139

THE M.I.T. LIBRARIES SEEK YOUR HELP

In connection with a research project sponsored by the Association of Research Libraries, we want to find out to what extent the Library collections are meeting the information needs of M.I.T. students, faculty and research staff. You can assist us by responding to the questions listed below.

Thank you for your participation.

Jay K. Lucker
Director of Libraries

Part I	Question	Card Column	Response
D	What is your status at M.I.T.? FX (Faculty) RX (Research Staff) MO (Masters Degree Candidate) MT (Masters/Teaching Asst.) MR (Masters/Research Asst.) DO (Doctoral Degree Candidate) DT (Doctoral/Teaching Asst.) DR (Doctoral/Research Asst.) U1 (Undergrad-1st yr) U2 (Undergrad-2nd yr) U3 (Undergrad-3rd yr) U4 (Undergrad-4th yr) XX (Non-Degree Program)	8-9	☐☐
E	What is your M.I.T. DEPT/LAB/CENTER affiliation? ____________________		
F	What is your Subject Specialty(ies) or Major Field(s)? ____________ ____________		
G	In which of these broad categories does your main interest lie? E (Engineering) D (Social Science) R (Architecture) U (Urban Planning) H (Humanities) M (Management) S (Science) X (Other - specify) ____________	10	☐
H	How often do you visit the M.I.T. Libraries? W (Weekly) M (Once or twice a month) S (A few times a semester) X (Seldom)	11	☐

3.47

Part II

Please express your opinions on the following questions of importance/satisfaction by using a scale of:

1 - minimum or lowest
2
3
4
5 - maximum or highest

If you do not know or have no opinion, please use 6.

I	How important to you is material for the following purposes?		
	a. Reserve use (Assigned readings)	12	☐
	b. Other course purposes (recommended readings, independent study, preparation for course teaching)	13	☐
	c. Research (Publication, dissertation, grant or contract supported research)	14	☐
	d. General interest or recreation	15	☐
	e. Other (Specify) ______________________	16	☐
J	How well do the M.I.T. Libraries serve your needs for material for the following purposes?		
	a. Reserve use (assigned readings)	17	☐
	b. Other course purposes (recommended readings, independent study, preparation for course teaching)	18	☐
	c. Research (Publication, dissertation, grant or contract supported research)	19	☐
	d. General interest or recreation	20	☐
	e. Other (specify) ______________________	21	☐
K	How effective do you find the Libraries' collections in your subject specialty or major field?		
? /	a. Scope	22	☐
	b. Depth	23	☐
L	What are the deficiencies, if any, in the collections in your subject speciality or major field? ______________________ ______________________		
M how strong is need	How well do the M.I.T. Libraries meet your needs for foreign language materials:		
	a. Romance languages	24	☐
	b. Germanic languages	25	☐
	c. Slavic languages	26	☐
	d. Oriental languages	27	☐
	e. Other (Specify) ______________________	28	☐
N	Is English your native language? Y (Yes) N (No)	29	☐
O	How important to you is material published more than 5 years ago?	30	☐
P	How well does the library meet this need for material older than 5 years?	31	☐

Q	Because the libraries cannot have all published material available in their collections, cooperative programs are maintained with other libraries so that materials can be borrowed form them or, in some instances, our users can use these materials at these other libraries.		3.48
	a. How successful has the library been in making you aware of these services?	32	☐
	b. How important are these cooperative services to you?	33	☐
	c. If you have used these services, how satisfied are you with the effectiveness of the service?	34	☐
R	How interested are you in influencing the selection of library materials (e.g. books, journals, etc.)	35	☐
S	How successful has the library been in giving you the opportunity to influence selection of library materials?	36	☐
T	How satisfied have you been with the libraries' response to your suggestions or requests?	37	☐

CAP 12/7/77

FACULTY PERIODICALS SURVEY

NAME ________________________________

DEPARTMENT ___________________________

FACULTY PERIODICALS SURVEY

1. Please list the periodical titles you read regularly:

2. What other titles do you consider to be significant in your field?

3. To which journals do you frequently refer your students?

4. Check the boxes indicating the years of periodical coverage you consider important in your field:

☐ -- Pre-1950 ☐ -- 1950-1960 ☐ -- 1960-1970 ☐ -- 1970-

5. List any titles to which the library does not subscribe that you think are important to your program:

3.50

COLLECTION ANALYSIS PROJECT

Task Force on Assessment

Faculty Interview

NAME ________________________

DEPARTMENT ________________________

AREA OF SPECIAL INTEREST ________________________

A. PERSONAL USE OF THE LIBRARY

1. How often do you use the University Library? ____ daily; ____ weekly; ____ monthly; ____ other.

2. Do you usually ____ come in person; ____ call by telephone; ____ send secretary or research assistant.

3. Do you usually find the materials or information you are looking for?

   ____ yes ____ no.

   When you are unsuccessful, is it because:

   ____ library lacks title ____ nothing yet published

   ____ materials checked out ____ other

   ____ materials not on shelf

4. Are you currently engaged in research which is hampered by lack of library resources, services or facilities? Elaborate.

B. INSTRUCTIONAL AND STUDENT USE OF THE LIBRARY

1. Have your students complained to you of inadequacies in seating, lighting, or other physical facilities? (Specific areas of complaint)

2. Have your students complained to you regarding Library service? (Specific areas)

3. Are you satisfied with the present system of handling Reserves? Specific suggestions?

4. Do you frequently lend students materials from your office? ____

   If so, what kinds of materials?

   How frequently?

   Is it a matter of convenience, or is it because of a library lack?

5. Do you ever have to restrict any assignments because of inadequacy in library materials?

   If so, what kinds of materials?

6. How do you go about evaluating adequate access to needed library materials before approving student research topics? (Dissertations, theses, practica, reading and conference, etc.)

7. Do you believe that the students would benefit educationally if there were a separate collection for undergraduates?

C. FUTURE PLANS (INSTRUCTION AND RESEARCH)

1. What new programs of instruction are you planning which will involve library resources (materials)? Services (Reserve, Reference, etc.)? Facilities?

2. Do you anticipate any changes or developments in your teaching methods (independent study, etc.) which would affect students' use of the library? How?

3. Do you feel restricted in planning research because of a lack of library resources, services or facilities? Elaborate.

4. Do you include provision for library support in proposals for research grants? Is this feasible?

D. RESOURCES

1. To what extent have the resources and facilities of the Library affected your decision to join the faculty? To remain here? (Greatly, moderately, none, etc.)

2. Is there a need for retrospective buying in your field? How much? To what extent can ILL, CRL, etc. substitute for purchase?

3. To what extent do you relay on your personal collection rather than on the collections of the Library? (Greatly, moderately, none)

4. Should the University Library acquire materials in fields not now directly covered by courses and research?

5. Roles of Library Representative and Subject Specialist

   a. How do you perceive the function of the Library Representative in your department? (Collection development responsibilities or processor of orders?)

   b. To whom do you make recommendations for library acquisitions?

      _____ Library Representative

      _____ Subject Specialist in Library

      _____ Other

   c. How do you perceive the role of the subject specialist from the Library within the area of collection development?

d. Is this arrangement (Library Representative/Subject Specialist) satisfactory? Any specific recommendations for improving?

6. The Library utilizes several approval plans and blanket orders. Does this function satisfactorily for your areas of interest?

7. Has the Library usually been able to secure the materials you have requested? When unsuccessful, what type of material is involved (foreign language, o.p., current titles, etc.)

8. Should the faculty have a role in assisting the staff of the Library in weeding obsolete materials from the collections?

9. Microforms

a. For what types of materials in your field do you find microforms acceptable? _____ deteriorating materials; _____ dissertations; _____ expensive materials which can be acquired in microform at greatly reduced cost; _____ little used materials; _____ other (please specify).

b. Do you have any suggestions for encouraging the use of microforms?

10. Resource Sharing

a. How satisfactory would you find the cooperative buying of certain expensive sets (purchase by U of A, ASU access through courier service)?

b. Do you use the services of the Interlibrary Loan? Successfully? Suggestions for improvement?

How often are you charged? How do you feel about charges?

c. Do you use the materials available on loan from the Center for Research Libraries? Should they continue to buy very expensive, rarely used materials for their members to access on demand?

Do you have any additional suggestions for the development of the Library in the areas of Resources? Physical facilities? Services? Personnel?

Leave Part II with faculty member, answering any questions they may have, and arrange for its return.

Arrange for distribution of student questionnaire in 300-and-above classes taught by interviewee in assessment area. Estimate how many you will need.

Add any questions on areas you as a Subject Specialist wish to collect for your own use.

STUDENT USER SURVEY

You can assist the University Library in making the best possible service available to students by answering the questions which follow. You do not need to sign your name, but please answer as many of the questions as possible:

Major Subject____________________

College____________________

Candidate for______________degree

Class Standing:

_____Freshman; _____Sophomore;

_____Junior; _____Senior;

_____Graduate Student

---

1. How often do you use the University Library?

____Daily

____Once a week

____Once a month

____First visit

2. Why do you usually come to the library? (Mark all that apply to you)

____Assigned readings

____Research; term papers

____Place to study

____"Fun" reading (fiction, etc.)

____Typing rooms, copy machines

____Other (Freshman Library Projects, etc., or specify)

3. When you look for books in the library, do you find that:

Book not owned by library:
____Often; ____Seldom

Book checked out:
____Often; ____Seldom

Book not on shelf:
____Often; ____Seldom

4. Did you find the books and magazines you needed today?

____Yes; ____No; ____Some

If not, what subject were you interested in?

____

5. What would help you to find library materials?

____More library tours

____More copies of the book I needed

____More reference help in service areas

____More instruction in library use

6. How can we improve our services?

____Longer hours

____More staff assistance

Change due date to:

____longer period
____shorter period

____other (please specify)

OTHER UTILIZATION MEASURES

Periodial Use Study

The literature contains numerous reports of journal use studies using a variety of sources of data: citation analysis, ILL requests, photocopy requests, use questionnaires, loan slip count, shelving statistics, etc. Many of these are not appropriate for use at BYU because we do not have data available, and most were short-term studies conducted in special libraries or in science libraries with limited collections. These traditional methods also have several inherent disadvantages that make them unsuitable for the Lee Library:

1. Short-term studies may not adequately reflect the long-term use and thus cannot be used reliably for decision making about storage, discarding, or cancelling subscriptions.
2. Some of the traditional studies do not give title-by-title evaluation.
3. Most of these studies are applicable to one library, and the results cannot be generalized.

Recognizing the need to have reliable title-by-title data on periodical use, we are recommending a simple technique that is easily conducted and monitored over an extended period and that produces data that can be used to make continuation, retention, and weeding decisions. This method was developed by Shaw (15) at Case Western Reserve University and has been used there successfully for several years. Moreover, the technique is easily adapted to individual subject collections or to the entire library serial holdings. It can also be used for both bound volumes and current unbound issues.

It is based on the premise that a small number of titles accounts for a large percentage of the use of library collections, and thus the important concern is to distinguish the used portion of the collection from the unused portion. If conducted over a long enough period, this study technique eventually reaches a "constant fraction," the point where the percentage of the journal collection used no longer increases. When this condition is reached, Shaw says, "There is a high probability that those volumes or titles that have not been used will not experience significant use in the foreseeable future. The result of the study, then, is to show which titles are used and which are unused, thus providing reliable data for making decisions about the disposition of individual titles or volumes.

The study procedure is simple. As journals are reshelved after use, the shelver places a gummed dot label in the spine of each bound volume or on the shelf front if the study involves current unbound journals. Each used volume receives only one dot, regardless of the number of uses. We are only trying to distinguish the used titles from the unused ones. (An alternative study methodology to be discussed later can be used if you need to know the number of uses a title or volume receives.) To monitor the results, the librarian or trained staff member walks along the shelves about once a quarter and records on a tally sheet the volumes with the dot labels on them. After each count, the librarian determines the percentage of the titles and volumes used. This continues until no additional uses are observed. The longer the study proceeds the fewer dots that are applied, which means that the long-term study takes little more effort and time than a short-term study and produces significantly more reliable results.

Procedure.

1. Select the area or subject to be studied. Obtain from the Serials Department a computer list of the journal titles for the subject being studied. Then determine the number of volumes in each title to obtain the total number of both titles and volumes. Count incomplete volumes of a title as a volume. You may want to type a tally sheet, or, if there is room, you may use the computer printout sheet to make your tally on.

2. Instruct shelvers in applying the gummed dot label on the spine of each periodical volume as it is reshelved, or for current periodicals on the self rather than to the individual issues. This enables the study to continue even if individual issues are picked up for binding, which may occur if the study continues over a binding period or more.

3. Every four months collect the data by examining the shelves and noting which titles and volumes are marked. Use the same tally sheets throughout the study to avoid the need to replicate data recorded in an earlier tally.

4. Continue the study until you reach the "constant fraction" state, that is until the percent of the volumes and titles used does not increase. This will probably take at least two years or more.

An alternate method is to affix to the spine or the shelf a one-inch-square, blank gummed label the first time a title or volume is reshelved. Thereafter, for each subsequent use, the shelver makes a hash mark on the label. This will enable you to determine how often a given title is used, which might be useful in determining whether or not a given journal should be allowed to circulate on a special loan.

If you use this technique, you can make the tally each four months by removing the labels from the books and replacing them with a clean label. The used labels can then be pressed onto the tally sheet for later counting. The shelvers must also be informed as to how to handle the label should they become filled before the regular tally time.

In determining whether or not to use this alternate method, be sure you have a specific objective to be achieved, since it takes more time and effort to conduct this kind of a study. Remember, too, that for most decisions about the disposition of a journal title, just knowing that is has been used will usually be adequate, since a small number of titles will account for a large majority of the use of the journal collection. Still, this alternate technique may be helpful in studying the value of marginal titles rather than for use in evaluating entire subject journal collections.

Analyzing the Data.

The data are best interpreted in terms of the percentage of the titles and volumes used. This requires knowing the number of journal titles and volumes in the collection being studied. From this you can then compute the percentage of both titles and volumes used each time you make a tally.

Zero use would obviously be a significant indicator, but it cannot serve as the exclusive justification for cancellation of a subscription or other decision. You would need to consult with faculty and collection development staff to assure that the intellectual content of the collection would not be subverted. Other considerations might be the existence of internal or external indexing or abstracting, commitments to consortia such as UCLC and RLG, etc. Shaw (15) suggests a method for determining the cost of maintaining non-used journals that might help in deciding what to do with the unused title. Moreover, storage decisions could also be greatly enhanced by the data obtained from such a study.

Periodical Sample Program.

During the summer of 1980, the Serials Department collected a random sample of titles from the serials record to study about twenty parameters, such as:

1. Average price
2. Dead title/current subscription ratios
3. Call number distribution
4. Geographical distribution
5. Language
6. Location in the Lee Library
7. Etc.

From the data, it was hoped some useful inferences could be drawn about the nature of the library serials collection. Because of the call number distribution data available, similar inferences can be drawn for subject areas of the file. Business, for example, could be studied from the set of data obtained from the study, and using standard statistical techniques, inferences could be drawn that would be true within acceptable limits about the business serials collection.

Anyone desiring to study the serials within a given subject area or a specific aspect of the serials collection should see Kirk Memmott in the Serials Department.

Circulation Statistics.

(To be added when the procedure is established.)

CHAPTER IV

SPECIALIZED ASSESSMENTS

ASSESSMENTS FOR WEEDING DECISIONS

An important reason for conducting a collection assessment is to determine what materials can be stored, discarded, or obtained in alternative formats to create a more workable collection. As libraries, particularly research libraries, grow ever larger trying to accommodate the increasing information output, patrons often find the accessibility of materials decreasing. More books don't necessarily mean more satisfied patrons. At BYU particularly where we have large numbers of undergraduates and only one central library, keeping collections current requires an effective, ongoing weeding program. But how can the library effectively make weeding decisions? Numerous researchers over the years have tried to develop quantitative measures of obsolescence or declining use, but Line and Sandison (10) concluded in a review article that measurements based on age (publication dates), use (last date of circulation) or citation studies are founded on questionable assumptions or do not adequately reflect all the parameters that need to be considered. One complication often ignored, for instance, is deciding whether the item is obsolete because its use has declined even though the information may still be useful. Measurements of document use, therefore, can only be a partial indicator of obsolescence.

The literature also reveals other problems with the presently developed obsolescence measurement techniques:

1. Many study methodologies overestimate the decline in use of older materials because they fail to make adjustments for changes in book publishing rates over the years or for differences in holdings by a library of various publication date periods.

2. Invalid or obsolete information today may not be invalid in the future because of user population changes or changes in university or library interests.

3. Most of the age-related obsolescence studies have been conducted in science libraries, which most likely do not reflect use patterns in the humanities or the social sciences.

4. The findings of these studies may not be applicable to other libraries with different objectives and clientele.

5. Past use does not always predict future use, although it is often indicative.

Consequently, we suggest that weeding decisions be based, for the most part, on a title-by-title evaluation. The following BYU Library Weeding Program statement, based largely on Yale's example, can aid the assessor in making these decisions in the absence of an effective quantitative measure. These guidelines should be applied by studying the books at the shelves. Generally, the guidelines are based on four criteria:

1. The value of the information content of the work.
2. The historical importance of the work to its discipline.
3. The availability of the information in other editions of the work or in other, perhaps more current, works on the subject.
4. The apparent use the title has received as evidenced by its physical condition, although use alone should not be the reason for weeding a title.

BYU LIBRARY WEEDING PROGRAM

Purpose

1. To relieve crowded stacks and to make room for new acquisitions.
2. To enhance the browsing capability of patrons.
3. To find items that need to be replaced to serve the demands of availability.

Definitions

The term "weeding" embraces three distinct concepts:

1. Discarding: Throwing away useless materials
2. Storing: Removing items from public stack areas to on-site or off-site storage facilities with delayed access.
3. Replacing with alternative formats: Purchasing or replacing books with microforms when use and space considerations make the microform more cost effective.

General Guidelines

1. The librarian must be aware that sound judgment and practical common sense must be used in making a weeding decision.
2. The librarian must be familiar with the literature of a given subject before making weeding decisions. Some time should probably be spent in "boning up" before undertaking a weeding project.
3. The librarian must be aware of any cross-disciplinary use of the materials he is considering for weeding. The inter-relationship of knowledge is increasing and many researchers have many cross-disciplinary interests.
4. No item is to be discarded solely on the basis of its physical condition.
5. Constant consultation with the faculty is necessary, since (a) the library can benefit from their expertise, and (b) it is important to have faculty awareness of what is being done. In many instances, faculty members will be willing to assist in the evaluation if asked.

Guidelines for Selecting Items for Storage

1. Out-of-date scientific and technological material. The definition of "out-of-date" should be determined in consultation with the faculty.
2. Older editions of works for which new editions exist, especially when the new editions have been revised and updated.
3. Books on highly specialized topics which are covered or duplicated in more extensive studies.
4. Books in uncommon languages on very specific topics.
5. Books by non-contemporary minor authors.
6. Early imprints which are not wanted in Special Collections.
7. Biographies of obscure persons.
8. Books in any discipline in which the information is now considered dated. (See #1)
9. Translations of works of which we have the work in the original language. (Depending on the toic, it may be preferable to leave the English translation of a foreign language work in the stacks.)

10. Books obviously unused, uncut, etc.
11. Books which are not needed on a given academic level. (Care must be taken to assure that the weeding procedures are entirely consistent with the collection policy statement.
12. Books covering periods of time not useful for the discipline.
13. Potential replacement copies. (This is to preserve a duplicate of a work that receives heavy use but which does not need to be used presently, i.e. Mormon books, periodical indexes, etc.)
14. Sets of an author's complete works when other sets are also in the stacks. (Some of these may also be considered for discarding if there are an inordinately large number of editions or duplicate editions.)
15. At times when space considerations warrant, all titles over a certain age or titles not circulated in over five years may be candidates for storage.

Guidelines for Selecting Items for Discarding

1. Duplicate titles deemed unneeded or superfluous.
2. Student course outlines, lab manuals, textbooks, etc. no longer currently used. (University Archives may be interested in locally produced materials.)
3. Second or additional copies of books with no demand.
4. Practical duplicates, i.e. exact reprints, second or subsequent printings, etc. with identical collation except for (a) date of publication, or (b) place of publication.
5. Older editions when deemed to be unneeded in a storage collection. (The fact that a new edition was printed suggests that the information contained in the old edition may still be useful and valid.)
6. Multiple copies of non-contemporary minor authors.

Special Considerations for Weeding Serials

Line and Sandison suggest that:

> A library may . . . do best to see (a) which journals are 'dead' (whether because they have ceased publication or because the library has ceased subscribing), and to

> consider whether they can be discarded, (b) which journals receive little use of their current issues, and to consider whether they can be cancelled and discarded, and (c) whether there are some journals that, although currently used, fall off so completely in use after three years that they need not be bound or retained after that time. A low level of use of current issues does not, however, necessarily imply negligible use of older volumes.

Of course, instead of discarding, some titles might better be considered for storage. Librarians should therefore begin now to study the use of serials in their various subject areas to determine (1) current use of periodicals, (2) use of older journal volumes, (3) use of 'dead' titles. The results from such a study can give data with which to make all three weeding decisions—discarding (see p. 3.57 for periodical use study techniques), storage, or purchasing alternative formats in lieu of binding or retaining bound issues.

ASSESSMENT OF APPROVAL PROGRAMS

Since the Lee Library maintains a number of approval order programs with book dealers in a number of areas of the world, an important assessment activity is to evaluate the suitability of the subject profiles periodically to assure that the library is receiving materials appropriate to the teaching and research needs of the university. If the profile is too narrow, we may not be receiving sufficient materials or may be ordering too many titles from notification slips. If the profile is too broad, we may be returning more books than would be necessary or filling the stacks and expending funds on items not really appropriate to the collection.

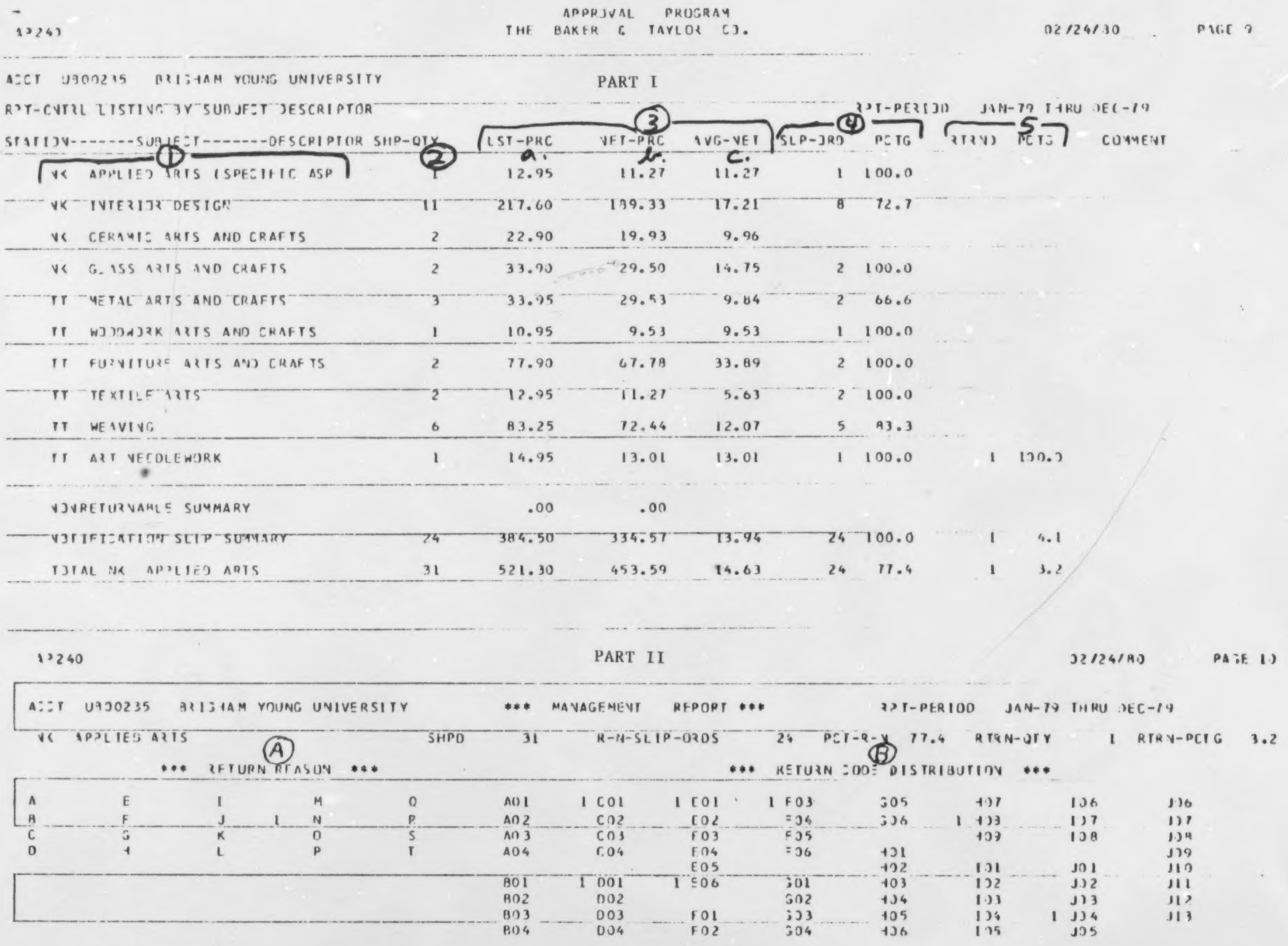
Like collection development policies, approval program profiles need periodic revision. Fortunately, some of the approval dealers, such as Baker & Taylor, provide quarterly and annual management reports that can aid the assessor in reviewing the approval profiles. As other dealers begin providing similar reports, istructions for their use will be added to this manual. At present, the following instructions will help you analyze the Baker & Taylor profile effectiveness. You should keep in mind, of course, that evaluating the profile should only be done after having developed a collection development policy for the subject(s) being evaluated.

Baker & Taylor Management Report

Baker & Taylor provides one major management report that provides useful data for analyzing the effectiveness of the profile. In addition, the Collection Development Division abstracts data from this report, adds data from another Baker & Taylor report, and makes a second management report that provides additional information. Both of these reports are available to you from the Assistant Collection Development Librarian.

Part I - Books Handled by Subject. This report is arranged by stations or subject terms derived from college catalogs. Each term is preceded by an LC call number category. Example A, p. 4.7, shows the information provided by the report:

Col. 1	Station term and LC call number
Col. 2	The number of books shipped in each category
Col. 3	Pricing information about the books shipped a. List price b. Net price c. Average net price
Col. 4	The number of books ordered by the library using Baker & Taylor notification slips, and the percentage this number is of the total shipped to BYU in each category
Col. 5	The number of books returned to Baker & Taylor, and the percentage this number is of the total shipped to BYU



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-                                        APPROVAL   PROGRAM
AP240                                THE  BAKER  &  TAYLOR  CO.                                  02/24/80        PAGE 9

ACCT  U800235   BRIGHAM YOUNG UNIVERSITY                PART I
RPT-CNTRL LISTING BY SUBJECT DESCRIPTOR                                      RPT-PERIOD   JAN-79 THRU DEC-79
                                                             ③                        ④               5
STATION-------SUBJECT-------DESCRIPTOR SHP-QTY  LST-PRC     NET-PRC   AVG-NET   SLP-ORD   PCTG     RTRND  PCTG     COMMENT
                  ①                        ②        a.          b.        c.
   NK  APPLIED ARTS (SPECIFIC ASP          1      12.95       11.27     11.27        1   100.0
   NK  INTERIOR DESIGN                    11     217.60      189.33     17.21        8    72.7
   NK  CERAMIC ARTS AND CRAFTS             2      22.90       19.93      9.96
   NK  GLASS ARTS AND CRAFTS               2      33.90       29.50     14.75        2   100.0
   TT  METAL ARTS AND CRAFTS               3      33.95       29.53      9.84        2    66.6
   TT  WOODWORK ARTS AND CRAFTS            1      10.95        9.53      9.53        1   100.0
   TT  FURNITURE ARTS AND CRAFTS           2      77.90       67.78     33.89        2   100.0
   TT  TEXTILE ARTS                        2      12.95       11.27      5.63        2   100.0
   TT  WEAVING                             6      83.25       72.44     12.07        5    83.3
   TT  ART NEEDLEWORK                      1      14.95       13.01     13.01        1   100.0        1   100.0

   NONRETURNABLE SUMMARY                            .00         .00
   NOTIFICATION SLIP SUMMARY              24     384.50      334.57     13.94       24   100.0        1     4.1
   TOTAL NK  APPLIED ARTS                 31     521.30      453.59     14.63       24    77.4        1     3.2


 AP240                                          PART II                                                  02/24/80      PAGE 10

 ACCT  U800235   BRIGHAM YOUNG UNIVERSITY          ***  MANAGEMENT   REPORT ***          RPT-PERIOD   JAN-79 THRU DEC-79
  NK  APPLIED ARTS                          SHPD     31      R-N-SLIP-ORDS      24   PCT-R-N  77.4   RTRN-QTY     1  RTRN-PCTG   3.2
                      Ⓐ                                                                 Ⓑ
          ***  RETURN REASON  ***                                     ***  RETURN CODE DISTRIBUTION  ***

 A        E        I          M        Q          A01     1 C01     1 E01     1 F03       G05        H07        I06        J06
 B        F        J     1    N        R          A02       C02       E02       F04       G06      1 H08        I07        J07
 C        G        K          O        S          A03       C03       E03       F05                  H09        I08        J08
 D        H        L          P        T          A04       C04       E04       F06       H01                              J09
                                                                      E05                 H02        I01        J01        J10
                                                  B01     1 D01     1 E06       G01       H03        I02        J02        J11
                                                  B02       D02                 G02       H04        I03        J03        J12
                                                  B03       D03       F01       G03       H05        I04      1 J04        J13
                                                  B04       D04       F02       G04       H06        I05        J05
```

4.7

Analysis of Data. The information on this report alerts assessors to potential problems with the approval profile or with the review procedures for books and notification slips. For example, if the percentage of books ordered from notification slips (Col. 4) exceeds 10 percent in a category, the profile may be too narrow. A high percentage might also indicate a lack of discrimination in ordering from notification slips, resulting in acquisitions inappropriate to the collection. On the other hand, if the percentage of books returned (Col. 5) exceeds 5 to 8 percent, the profile may be too broad. In any instance, the management report should be carefully analyzed to detect potential problems, since the purpose of an approval program is to receive desired books automatically without the cost of individual ordering.

The number of books shipped (Col. 2) can be useful in helping you become more familiar with the actual volume of materials being received through the approval dealer.

Over time, the cost data (Col. 3) can help you understand the relative effect inflation is having on your subject area. It can also help you give educated estimates of the amount being spent by the library and the average cost of a book for a given subject area.

Part II - Returned Books. This report shows the reasons you returned a book. The "Return Reason" codes A-T, are the same as those numbered 1-18 on the back of the green copy of the notification slip and reproduced below.

	Code	Reason for Return
Group A Duplicates	1	Title is already in our collection
	2	Title is on order
	3	Title is received/on order through a foreign source
	4	Title is on standing order by series
	5	Title is on standing order with publisher or received by organization membership
Group B Collection Development Decisions	6	Material is too highly specialized
	7	Geographic area is of limited interest
	8	Specific topic is of limited interest
	9	Treatment is too popular
	10	Treatment is too low level
	11	Scholarship is poor
	12	Treatment by this publisher is unsatisfactory
	13	Textbook: not wanted
	14	Readings/reprinted articles: not wanted
	15	Unacceptable format
	16	Library already has adequate material in this subject
Group C Shipping	17	Volume is defective/damaged
	18	Wrong volume has been sent

The "Return Reason" (A) section of this report (see p. 4.7) shows the number of books returned for each reason. If more than one reason was given for a return, the total number in this section would be higher than the total number of books returned.

The "Return Code Distribution" (B) section of the report shows the number of books returned arranged by Baker & Taylor's Modifier Codes given on the back of the yellow copies of the notification slips.

MODIFIER CODES

A PUBLISHERS
- Commercial
- University Press
- University Affiliated
- Societies & Associations

B COUNTRY OF PUBLICATION
- United States
- Canada
- Great Britain
- Foreign

C LANGUAGE OF PUBLICATION
- English
- French
- Spanish
- Other Foreign Lang.

D EDITION
- First
- Subsequent
- Translation
- Reprint

E PHYSICAL FORMAT
- Hard
- Paper
- Spiral
- Loose Leaf
- Multi-Media

F CONTINUATIONS
- Series Vol 1
- Series, Any No
- Serials Vol 1
- Serials, Any No
- Sets Vol 1
- Sets Any

G SUBJECT DEVELOPMENT
- History Bibliography
- Biography Legal Aspects
- Studies & Teachings
- Techniques

H TEXTUAL FORMAT
- Lab Manual
- Readings
- Pictorial Treatment
- Directories
- Anthologies
- Text, Lower
- Text, Upper
- Programmed Material

I ACADEMIC LEVEL
- Undergraduate
- Graduate
- Professional
- General Supplementary
- Extra Curricular

J GEOGRAPHIC DESIGNATORS
- United States
- Canada
- Latin America
- Great Britain
- West Europe
- East Europe, USSR
- Near East, N. Africa
- South-SE Asia
- Africa
- Far East
- Oceania
- Arctic Antarctic

Analysis of Data. Since both columns A and B show each book under as many categories as apply, i.e. under each reason given for its return and under all applicable modifier codes, the data can only be analyzed by considering the numbers in each category. For instance, if a large number of returned books were coded I06, Academic Level, Community College, it might be a sign that the profile should be adjusted to supply slips instead of books for that academic level or to exclude them entirely. Any time the return rate in any of the categories in Section B exceeds 5 percent, the profile should be reviewed to see if adjustments need to be made. This will alleviate the unnecessary review and return of so many unwanted titles. To determine the percentage of books returned in the subject categories, refer to Section 5, Part I of the report, discussed above.

Collection Development Combined Statistical Report

The Collection Development Division compiles a statistical report from data supplied by Baker & Taylor and the Collection Development Division. The data on this report can help you better understand a number of aspects of the collection development activity for the subjects you have responsibility for analyzing and assessing. The report is provided for each material selector and gives the following information (see p. 4.11):

Col. 1	LC classification
Col. 2	Subject
Col. 3	Number of Baker & Taylor titles available in each subject
Col. 4	Number of available titles acquired by BYU
Col. 5	Percent of available titles acquired by BYU
Col. 6	Average net price per title
Col. 7	Number of books ordered by notification slips
Col. 8	Percent of total books acquired with notification slips
Col. 9	Number of books sent on approval that were returned (This number added to Col. 4 shows number of books sent to BYU)
Col. 10	Percent of books sent on approval that were returned
Col. 11	Total net cost of all books acquired by BYU
Col. 12	

Analysis of Data. The most useful data on this report is the comparison of the number of Baker & Taylor titles available (Col. 3) with the number and the percentage of the titles actually acquired by the library (Cols. 4, 5). This comparison can help you determine whether or not the profile is properly limited or expanded to support the collection level established for each subject. The report also allows you to compare roughly how much was spent with Baker & Taylor (Col. 11) to that spent from a departmental collection budget.

		1	2	3	4	5	6	7	8	9	10	11	12
EVEL	NAME	LC CLASS	SUBJECT STAT. NAME	B&T TITLES	BYU TITLES	BYU % T	BYU $\bar{x}$ NET	SLP ORDER	%	RTRND	%	NET-PRC	1979 BOOK BUDGET
1	Larry Benson	BF	Psychology	724	271	37.4	14.13	16	5.9	17	6.2	3,831.77	797.45(CDFR) 2,691.23
		BF	Parapsychology & Occult	55	1	1.8	16.49	0	0	0	0	16.49	
		H	Social Science & Statistics	161	55	34.1	14.28	7	12.7	3	5.4	785.93	
		HM	Sociology	732	279	38.1	12.10	19	6.8	5	1.7	3,376.12	3,234.45
		HV	Social Welfare	256	87	33.9	11.84	6	6.8	2	2.2	1,030.48	
		HT	Regional Planning	184	40	21.7	17.71	2	5.0	1,	2.5	798.51	
		JK	Unites States Government	348	98	28.1	12.73	5	5.1	3	3.0	1,247.99	
		JX	International Relations	296	145	48.9	14.26	4	2.7	2	1.3	2,097.98	
		K	Law	395	3	0.8	17.38	3	100	0	0	52.16	
		HV	Criminology	223	73	32.7	12.44	8	10.9	4	5.4	908.67	
		J	Political Science	269	92	34.2	13.51	4	4.3	1	1.9	1,243.11	2,617.51
		JF	Government	421	108	25.6	13.84	7	6.4	2	1.8	1,494.74	
		RC	Psychiatry	285	18	6.3	15.01	18	100	0	0	270.23	
		U	Military Science	212	42	19.8	13.69	5	11.9	0	0	575.10	186.80
		V	Naval Science	61	13	21.3	14.99	0	0	0	0	194.95	
			General Total									17,834.23	10,128.44

CHAPTER V

REPORTING ASSESSMENT RESULTS

The collection assessment is not complete until the results have been reported clearly and concisely. The length and the kind and amount of data to be included will vary, depending on the scope and purpose of the assessment, but it should be complete enough to support any collection development decisions based on it. Mosher (16 p. 542, Appendix D) provides a useful list of what a good report should include:

1. The reason why the evaluation was conducted.
2. The nature and goal of the evaluation.
3. The method or methods used.
4. Problems encountered (particulary those that may have affected the results).
5. General comments about the collection.
6. A summary of specific strengths or weaknesses.
7. Suggestions for additional analyses and recommended methods.
8. Peripheral discoveries or observations of use to the library.
9. A plan or campaign of action to improve collections in areas of undesirable weakness, with lists of specific items or types of materials needed, and cost estimates for the campaign where appropriate.

If the assessment was made as a part of an accreditation procedure, be sure to include all items required by the accrediting organization. If no specific format or list of desired information is supplied, include at least items 2, 3, 5, and 6 above. Example A at the end of this chapter is an illustration of a very detailed accreditation report of the Education Collection of the Lee Library done in 1980. Not all accrediting organizations, however, require this much information. Example B is a report of the asessment of the Organic Chemistry Collection done as part of the library's Collection Analysis Project in 1979.

Mosher (above) suggests that since many reports become long and complex, it is often useful to prepare a summary report extracting only the bare bone details of the longer report. (See Example C at the end of this chapter.)

Method of Presentation

The bulk of the report will consist of prose analysis and description. But in compiling your data and trying to make it readily understandable to a reader, don't ignore the value of using tables, graphs of various kinds, pie charts, column charts, etc. Line (9, Chapter V, Appendix D) provides an excellent discussion of graphics in report writing to give you assistance in selecting and developing appropriate graphics.

The completed reports should be submitted to the Assistant Collection Development Librarian.

EXAMPLE A

ACCREDITATION REPORT OF LEE LIBRARY EDUCATION COLLECTION

5.1 Library

The Harold B. Lee Library, a major educational and cultural resource of the Brigham Young University, The Church of Jesus Christ of Latter-day Saints, the local community, and the state of Utah, exists to acquire, preserve, and make available for use a collection of the recorded knowledge of mankind in support of the goals of the university, to assist patrons in finding and using these resources and information resources elsewhere, and to foster and encourage learning and scholarship.

Statement of Collection Philosophy

The library collections and the collection development program are established and maintained to meet the instructional and research needs of the university. Consistent with the collection policy statements, the library exercises critical sensitivity in the acquisition of books, periodicals, pamphlets, manuscripts, ephemera, photo reproductions, maps, music scores, phonograph records, and other nonprint media. Museum artifacts are not generally acquired or accepted unless they have an intrinsic relationship to the collection.

The library faculty maintains a close relationship with all academic departments, encourages faculty recommendations for acquisitions, keeps aware of new and changing academic programs, and endeavors to build collections to support the curriculum and research.

The library will continue to maintain excellence in collections that have already been developed to a position of strength or recognized prominence and will not develop new collections at the expense of existing strengths unless significant shifts in academic programs necessitate reconsideration.

In addition, the library recognizes its responsibility to communities beyond the Brigham Young University campus. The library is the principal repository of the world's accumulated knowledge within The Church of Jesus Christ of Latter-day Saints, and maintains a record of the history and accomplishments of the University and the LDS community. The library also supports state, regional, and national cooperative efforts in materials acquisition and resource sharing.

In summary, the library is committed to securing materials necessary to--

(1) meet instructional program requirements of the university;

(2) satisfy information demands related to student and faculty research;

(3) provide general coverage in areas of knowledge not included in formal instructional and research programs of the University;

(4) preserve a comprehensive record of the Latter-day Saint doctrine, history, and culture; and

(5) preserve materials related to or produced by the university, its staff, and the student body.

Holdings

The library--housed in the Harold B. Lee building--consists of approximately 1,537,834 volumes of books, periodicals, government documents, and pamphlets; 395,144 volume equivalents in microforms;

126,722 maps; and 36,236 nonprint items. See table 1, taken from the 1978-79 annual report, for a further breakdown.*

Over 17,411 serials subscriptions are currently active and 43 newspapers are received regularly. The library is a depository for United States, United Nations, Mexican, and Canadian government publications.

The long term growth and development of the Harold B. Lee Library is graphically portrayed in table 2.

Cooperative Agreements

The Harold B. Lee Library is a member of the Research Libraries Group (RLG), with the accompanying borrowing privileges and collection responsibilities. The library is also a participating member of the Utah College Library Council. Through this membership students and faculty are permitted full access to all other college and university libraries in the state. In addition, the library provides interlibrary loan service, augumenting its own collection by borrowing needed books and other publications from other universities (see table 3). An attempt is made, however, to keep a balance in the library holdings by following the recommendations of library and accrediting associations in determining the percentage of books and other publications to be purchased and/or obtained from other libraries in each academic area.

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*Annual Report for the Harold B. Lee Library, Brigham Young University, 1978-79. (See Exhibit B-5.a. The 1979-80 annual report will also be displayed if available.)

Table 1

Harold B. Lee Library
Materials Added to the Collection and Holdings***

Category	Added		Percent Change	Holdings	
	1977-78	1978-79		1977-78	1978-79
Books	43,639	42,253	- 3.2	982,664	1,023,639
Serials	11,341	14,109	24.4	320,052	344,161
Documents (bound)	6,404	6,626	3.5	95,047	101,673
Documents (unbound)	3,864	4,310	11.5	64,778	69,088
Pamphlets	1,043			9,273	9,273
Total volumes added	66,291	67,298	1.5	---	---
Less withdrawn	- 4,026	- 1,278	- 68.3		
Total holdings					
Net volumes added	62,265	66,020	6.0		
Total holdings				1,471,814	1,537,834
Microforms added (in volume equivalents)					
Microprint	2,389	1,728	- 27.7	83,083	84,811
Microcard	222	296	33.3	9,697	9,993
Microfiche	25,023	27,125	7.7	216,347	243,472
Microfilm	2,033	3,795	8.7	53,073	56,868
Total microforms	29,667	32,944	11.1	362,200	395,144
Maps	7,400	16,097	117.5	110,625	126,722
Sampler* (net added)	260	78	- 70.0	---	---
Nonprint materials	5,458	2,647	- 51.5	33,659	36,236
Audio cassettes/tapes	(4,419)	(794)	- (82.0)	(15,056)	(15,812)
Phonodiscs	(522)	(270)	- (48.3)	(15,492)	(15,887)
Film materials/slides	(448)	(1,469)	(227.9)	(2,236)	(3,731)
Charts/maps	(10)	(37)	(70.0)	(61)	(78)
Video cassettes/tapes	(16)	(22)	(37.5)	(274)	(297)
All other nonprint	(36)	(75)	(108.3)	(416)	(431)
Total library materials					
Added	109,076	119,064	9.2	---	---
Less withdrawn	4,026	**1,426	- 64.6	---	---
Net total added	105,050	117,638	12.0		
Total holdings				1,978,298	2,095,936
Serials subscriptions	17,367	17,411	0.3	---	---

*Withdrawn. 1977-78: 443; 1978-79: 663. Sampler not included in holdings.

**Including 70 nonprint items withdrawn and 78 for sampler excluded from holdings.

***Annual Report for the Harold B. Lee Library, Brigham Young University, 1978-79 (see Exhibit B-5.a.).

Table 2

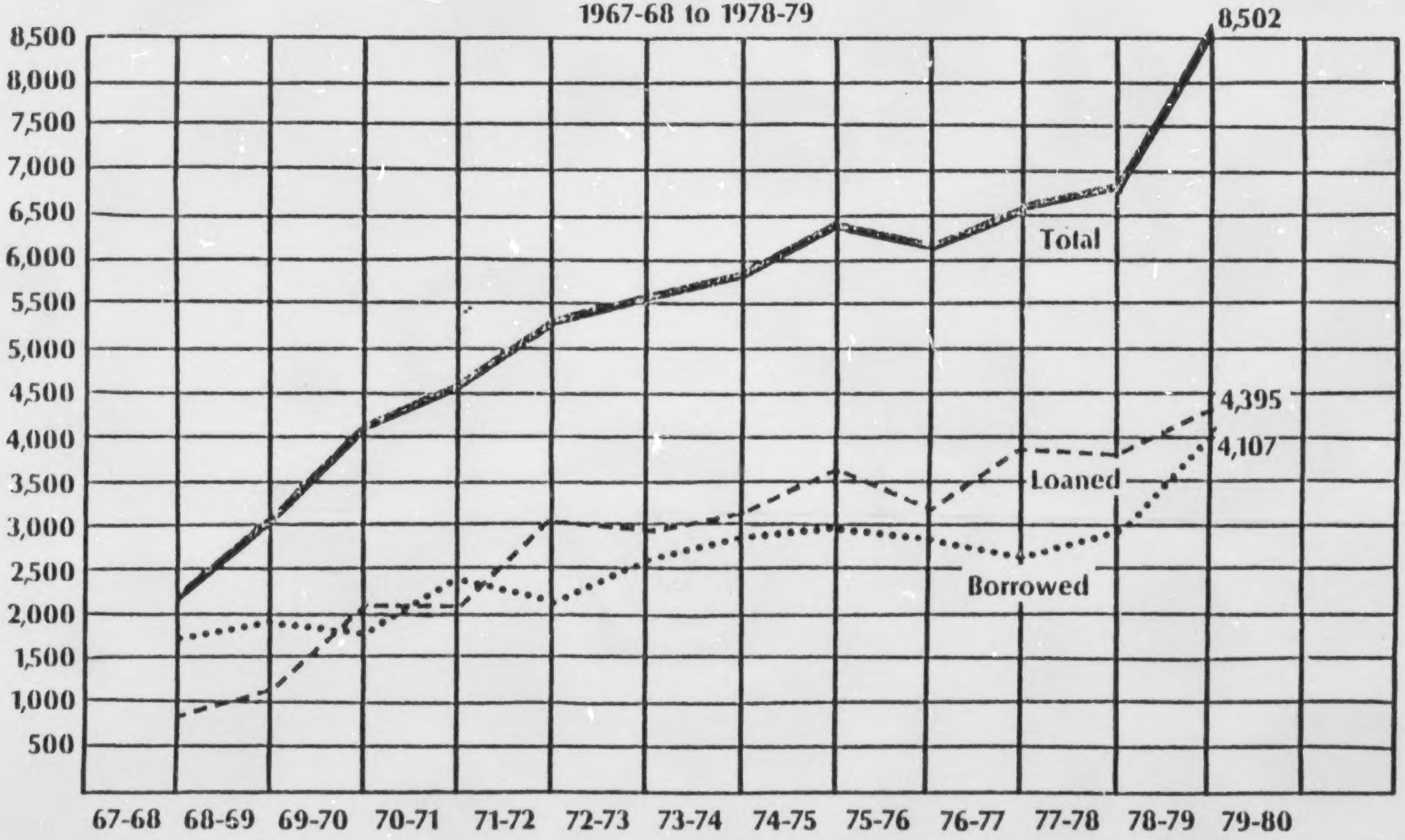
Harold B. Lee Library
Library Growth and Development *

	1966-67	1978-79
Library use:		
Interlibrary loan	1,847	8,502
Total use	1,384,147	2,089,016
Microform use	34,372	224,000
Copy service (patron copies made)	452,971	1,231,086
Reference questions	76,569	189,845
Building facilities:		
Number of faculty accommodated by research rooms	52	138
Seating stations	2,300	4,800
Typing rooms	1	5
Group study rooms	3	43
Staff:		
Noninstructional	18	53
Administrative and faculty	37	64
Student (FTE)	66	116
Building size in square feet of floor space	205,000	430,000
Collections:		
Volumes	626,621	1,537,834
Recordings	5,986	31,699
Microforms	75,785	395,144
Maps	27,385	126,722
Current subscriptions	11,000	17,411
Microforms added annually	12,171	33,000
Total items added annually	77,000	120,000

*Annual Report for the Harold B. Lee Library, Brigham Young University, 1978-79 (see Exhibit B-5.a.).

Table 3

Harold B. Lee Library
GROWTH OF INTERLIBRARY LOAN USE *
1967-68 to 1978-79



*Annual Report for the Harold B. Lee Library, Brigham Young University, 1978-79 (see Exhibit B-5.a.).

Standards

The library fully supports the achievement and maintenance of accepted standards in collections and services, such as those recommended by the National Council for the Accreditation of Teacher Education and various divisions of the American Library Association. Recommended bibliographies and standard lists are regularly checked to assess the adequacy of library holdings. Surveys are also made to determine the accessibility and availability of library materials as well as the quality of library services and the degree of user satisfaction.

Facilities and Services

The library complex consists of five floors in the original north wing erected in 1961 and six floors in the addition which was completed in 1976. The third floor is the entrance level with the first and second floors below ground.

The library is designed to function with broad subject divisions located on four of the six floors and a General Reference Service on the main (or entrance) level. The Technical Services area is on the sixth floor of the new addition.

Subject divisions and other special areas are described as follows:

(1) Level One.

The Social Sciences Division is located on the first floor of the library. The term Social Sciences is interpreted very broadly as this area includes government documents and the maps collection, in addition to such subject areas as education, business, political science, psychology, sociology, etc. A picture file, heavily used by student teachers, is also housed in this area.

Five professional librarians, two full time secretaries, one full time clerk, and approximately nineteen student workers are assigned to this area. The professionals include the education librarian; the business/ economics librarian; the maps librarian; the government documents librarian; and the social sciences librarian, who is responsible for the remaining disciplines. These librarians work at the reference desk and are responsible for building and maintaining their respective collections. They also teach orientation classes, do computer searching, and work with students and faculty members in many ways.

The Union Pacific Micrographics Center, where materials are microfilmed for the library and other campus divisions, is located on the first level, as is the Asian Collection, which consists of materials in Asian languages.

(2) Level Two.

The Science and Technology Division on the second floor includes publications dealing with agriculture, astronomy, chemistry, earth sciences, engineering, home economics, life sciences, mathematics, medicine, physics, and allied disciplines.

Also on Level Two is the Library Information Network Center (LINC) where computerized bibliographic searches are available to students, faculty, and other University personnel. There is one full time computer searcher who coordinates the searching of the LINC Committee, which consists of various subject librarians who are trained and experienced searchers. The Center provides access to the Lockheed, Systems Development Corporation, Bibliographic Resource Service, Medline, and other data services.

The Library Learning Resource Center (LRC) is located in the south wing of Level Two. It is the largest of several centers on campus which provide instructional materials and audiovisual facilities in support of student and faculty needs. The facilities are designed for individualized and small group work, with a large carrel area and several small group viewing rooms. Most of the collection is shelved in a reserve area located behind the service counter.

Total library LRC area encompasses about 18,000 square feet. Approximately half of this area is occupied by 282 carrels which house various kinds of audiovisual equipment.

Two large group viewing rooms with 30 to 40 seats and three small viewing rooms with 6 to 10 seats are also equipped with various kinds of audiovisual equipment.

The LRC Collection is primarily designed to support the academic curriculum although many general interest materials are also available. An extensive collection of about 16,000 phonorecords places heavy emphasis on classical music, jazz, drama, and poetry, with very limited emphasis on popular music. The records are primarily for use in the LRC and are not generally checked out except for classroom use.

A fast growing collection of about 15,000 audiocassette tapes is also available. Tapes in this collection, as well as in a 4,000 reel tape collection, cover a great variety of topics concerning most areas of the curriculum and university life. Many of these tapes can be checked out for use outside the LRC, or a quick copy of a tape can be made for the patron when the tape has been cleared for duplication.

Slides, filmstrips, videotapes, films, and other media, as well as audiovisual equipment, electronic calculators, and audiocassette players are also available in this area.

The library LRC also provides a record/tape distribution system; a television viewing system; a language practice area; TICCIT (Time Shared Interactive Computer Controlled Information Television); APPLE II plus; telephone-audio distribution system, Tele-Tip, which contains over 200 different messages dealing with commonly asked questions from all over campus and concerning services in the local community.

(3) Level Three.

The central area on the main floor (Level Three) houses the General Reference Division, which includes interdisciplinary materials such as biographies, general bibliographies, book reviews, encyclopedias, etc. This excellent service provides help with card catalog problems, handles general inquiries, and refers patrons to the subject reference areas for more specialized assistance. Interlibrary Loan is the part of this division which requests materials needed by our faculty and students from other libraries. Under reciprocal agreements, materials are borrowed for faculty, graduate students, and undergraduate students from other libraries within Utah, with only faculty and graduate students having borrowing privileges for out-of-state services.

The Circulation Department at the north end on Level Three has one major function: to make available all library materials which are designated for general use. Services include check-out and check-in, holds, recalls, searches for missing materials, shelving and stacks management, and the maintaining of accurate circulation records. Other department functions are exit-control, locker assignment and maintenance, and the faculty book delivery service.

Copy Services, the Current Periodicals Reading Room, and the Library Cashier are also located in the north wing on Level Three. The Director's Office and the Business Office are located just north of the core area.

The General Education Learning Center, located north of the General Reference Area, provides students a site where tutorial and faculty assistance in various learning skills and disciplines can be obtained. Assistance is currently provided in reading, writing, study skills, diagnostic testing, interpersonal relations and communications, and economics. Learning media are often used to facilitate learning, but the primary means of assistance is tutorial.

Although strongly oriented toward the fulfillment of the General Education requirements, the tutors are generally qualified to provide assistance in many levels of their particular disciplines. Students requesting assistance beyond the capabilities of the student tutors can get help from faculty members, as circumstances dictate. This center also coordinates mini-classes on efficient library use, research methods and materials, computer searching, and the like. Some of these classes are taught by subject librarians.

The Card Catalog is located near the General Reference area in the south wing of Level Three. The Reserve Reading Room is found at the east end of that wing. The Sampler, a recreational and current awareness reading collection, is also located in the south wing on the main floor.

(4) Level Four.

The History and Religion Division is located on the fourth floor. Subjects included in this area are anthropology, geography, history, philosophy, archaeology, genealogy, and religion in general and Mormonism in particular. Of special interest in this area are the card catalogs containing the Indian Bibliography, the History Book Review Index, the Scripture Citation Index, and the Arabic Catalog.

The Microforms Area on this level contains most of the library's extensive collection of microform materials in all subjects. The ERIC microfiche collection is housed here.

The Utah Valley Branch Genealogical Library, located in the Microforms Area, provides access to the microforms and books in the library which are helpful in genealogical research, as well as items on loan from the Genealogical Library in Salt Lake City.

Special Collections, located in the northeast wing on Level Four, contains books, manuscripts, and other materials whose unique nature or content requires that their usage be regulated. Because of their uniqueness, value, or fragility, care is taken to protect them from damage or theft.

Special Collections houses various comprehensive collections of books, pamphlets, and manuscripts, each compiled on a subject, era, or author. The Mormon Collection contains materials on Mormonism, Utah, and the West. Associated with this collection is the Leroy Hafen Collection of Western History. The Victorian Collection is a collection of literature of that era. The Whitman, Melville, Wordsworth, and Burns Collections contain materials written by and about these respective authors. Duplicate circulating materials can often be found in the library's regular stacks. Books in the Rare Collection are so designated because of their monetary value or scarcity. The Vault Collection houses the most valuable books and manuscripts. The BYU Collection consists of the theses and dissertations completed by Brigham Young University students. Circulating copies of these materials are usually available in the general library stacks. The Presses Collection comprises selections from some of the fine presses in the history of printing.

The Honors Reading Room, the Ancient Studies Reading Room, and the Charles Redd Center for Western History are also on Level Four.

(5) Level Five.

The Humanities and Arts Division collects materials in the areas of literature, languages, music, art, and library science.

The Juvenile Collection of the library is very important to the College of Education. It is housed in the Humanities Area to emphasize its literary aspects, but the budget is administered by the education librarian, who cooperates with the humanities librarian in developing and maintaining the collection. Part of this collection, formerly called the Curriculum Collection, was housed on Level One with other education materials, such as elementary and secondary education textbooks, curriculum guides, games, and related material. The curriculum materials, except for the juvenile books, are now located in the Education Learning Resource Center in the McKay Building. At the time the Curriculum Collection was in the library, historical children's literature--that published before a certain year--was located with the Literature Collection on the fifth floor. All children's books have now been combined on Level Five to form the Juvenile Collection, which will eventually encompass the current, high-use Juvenile Collection, the few remaining unreclassed "curriculum" books, and the books formerly known as the Historical Collection.

Holdings are as follows:

Juvenile	13,350
Unreclassed curriculum	4,000
Historical Collection	10,825
Total titles	28,175*

A Juvenile Literature Reference Section and a card catalog are located near the collection.

Most books for the Juvenile Collection are selected by the education librarian and faculty members in the College of Education. In addition, new books are read, discussed, and reviewed by a Children's and Young Adults Literature Review Group, chaired by the education librarian and comprised of about sixteen faculty members and representatives from such areas as education, English, the library, library science, theater arts, child development, geography, the University Bookstore, and others. These people contribute to a book review publication published by the College of Education and sent to teachers and librarians throughout the state.

The Music Research Area is located on Level Five. The library has more than 26,000 volumes of music literature and more than 17,000 records and tapes. Included are a number of interesting special collections, such as the Bruning Collection of Early Secular American Music, the William Primrose Viola Library, and the Capitol Records Manuscript Collection. All are fully cataloged.

There is also a Fine Arts Print Collection comprised of about 25,000 prints. It is located near and serviced by the Humanities Reference Desk.

The Graduate School of Library and Information Sciences, which sponsors some general student library instruction classes and offers the Masters of Library Science degree, is found in the north wing of the library on Level Five.

The Archives and Manuscripts Division is located in the northeast corner of this floor, with a large storage area on the first floor and a University Records Center in the Grant Building. This division serves as a repository and research center for original records documenting history. At the present time, the foremost divisions are the University Archives, the BYU Photo Archives, and the Manuscript Section, which features the Mormon Experience, Arts and Communications, the American West, Nineteenth and Twentieth Century American Literature Figures, Utah History (especially business and labor), Women's History Archives, Wells' Freedom Archives, Middle American Archives, and selected aspects of Western civilization.

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*This figure does not include duplicate copies.

Book Selection and Acquisition

The Harold B. Lee Library participates in various approval plans wherein the library contracts with library supply agencies to select new books as issued by the publishers. Profiles are prepared by the library indicating publishers, subject categories, levels, formats, and so forth, to be automatically shipped.

Contracts are presently in operation covering publications in the field of education for the United States, Canada, Central Europe, England, and Latin America. The profiles are written for extensive coverage in the United States and Canada with less emphasis on the other areas of the world noted above.

Publications of commercial presses, including university presses, are the most extensively covered. Publications of societies, institutions, governments, and the like, have more limited coverage and are selected on a title-by-title basis apart from the approval programs. (See Exhibit B-5.b. for an example of subject profile sheets.)

To supplement the books received on approval plans, the education librarian checks bibliographies, book reviews, and publication notices to assure that the important education materials are purchased. Faculty members are encouraged to submit requests for specific books or bibliographies to be checked. It is especially important for them to request the more obscure publications which might not be picked up in the approval plans or in a check of prominent education journals. Faculty requests are submitted through a department faculty library representative, who is appointed by the dean and who serves as a liaison between that department and the library.

Assessment of Collections and Services

During 1979, the library participated with four other libraries involved in an Association of Research Libraries Collection Analysis Project (CAP). This project involved a study team of six librarians and five task forces with thirty-five library professionals, staff members, and student workers participating.* The study culminated with a final report and fifty-three recommendations for improvement of the general library program. A number of these recommendations have already been implemented, others are in various stages of completion. The education librarian, as an example, is now chairing the subcommittee charged with writing a collection assessment manual to serve as a guidebook for future evaluations. Other committees are working on weeding and preservation procedures, alternatives, etc. A copy of the CAP report is available with the display materials (see Exhibit B-5.d.).

In 1978, the library commissioned the David O. McKay Institute of Education to conduct a comprehensive library user survey. This survey provided valuable insights into the attitudes and library needs of students and faculty members. Many changes have been made in policies and procedures as a result of these findings, such as the following:

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*The education librarian, for example, chaired a subcommittee studying methods for evaluating periodicals. The education periodical collection was evaluated as a prototype for periodical evaluations in all areas (see Exhibit B-5.c.).

(1) Library staff meetings are now held in the early morning hours rather than in the afternoon when the study indicated library use was heaviest.

(2) Use patterns for subject periodicals have been determined and arrangements made to avoid sending them to the bindery during peak use periods.

(3) Professional reference librarians, rather than reference assistants, are covering the busier evening hours.

(4) An emphasis on current shelving and continuous shelf reading has been reaffirmed.

(5) A special student employee training program, with emphasis on courtesy and solid preparation, has been adapted and is functioning.

An ongoing source of user opinion is provided by a suggestion box in the General Reference area. Suggestions are thoughtfully considered and replies are posted regularly.

The Library as a Resource for Teacher Education

The Harold B. Lee Library performs a vital function in the education of future teachers. It recognizes the importance of providing up-to-date materials and services which will support the curriculum, complement the teaching of the faculty, and allow students and faculty to pursue independent research. Planned growth and the periodic reassessment of collections and services are vital to the successful performance of the library function.

Collection Assessment

One of the recommendations resulting from the Collection Analysis Project dealt with collection development leaves for each subject librarian. The education librarian is planning a six-week collection assessment leave during the Fall Semester of 1980. During that time, work on subject collection policy statements should be completed, representative segments of the collection evaluated, and plans made for an orderly weeding program.

Collection Building

As a result of the Collection Analysis Project, the library is adopting a comprehensive collection development policy. According to the assistant director of libraries for collection development and conservation, the policy follows a

> rational plan to meet identified and specific needs, as well as providing a clear interpretation of the status, needs, and goals of major academic programs. Other uses of the policy will include its service as a guide in determining which materials should be removed from the main collections, either for discard or for transfer to storage, indicating collections of recognized prominence or particular strength to which the library has a continuing commitment, and aiding in the development and justification of budget requests.

Each subject librarian has been charged with the development of individual subject policy statements for each department for which he/she is responsible. The education librarian is working with department chairmen, library representatives, and faculty members to prepare general statements for major subject divisions in the college and subdisciplinary statements for areas which lend themselves easily to precise descriptions (see Exhibit B-5.e.).

Library Holdings in Education

The library is in the process of changing from the Dewey Decimal Classification System to the system developed by the Library of Congress (L.C.) All materials added since May 1977 have been cataloged according to L.C., and the earlier ones are in Dewey. Many materials used by educators are, of course, classified under psychology, sociology, management, and virtually every other subject area to some extent.

There are also many government documents of importance to educators. However, only those materials classified in the Dewey 370's and the Library of Congress L's are included in table 4 below.

Table 4

Library Holdings in Education

	370's	L's
Volumes (excluding microfiche)	56,899	2,282
Microfiche (volume equivalents)	127,921	42,525
Total*	184,820	44,807

*Total number of juvenile volumes (not included in this total) is 28,175 (not including duplicate copies).

Multicultural Resources

The library approval plan subject profile is written to include books covering all cultures at a general level. Extensive coverage is given to the American Indian. Special emphasis is given to Latin America, Asia, and the Middle East.

Library Expenditures

Approximately 2.26 percent of the total library budget is spent on educational materials. Closely related materials, such as psychology and subject-related study and teaching publications cataloged in the subject areas are not included in this figure.

Because of university policy, no university or library expenditures are included in this report. These confidential figures will be given on request to the accreditation team by the financial vice-president of the university during the accreditation visit.

BYU Library Holdings Compared to Standard Bibliographies

As an indication of the adequacy of the library collection, standard bibliographic lists have been checked and the results tabulated as listed in the following paragraphs and tables.

The library has 100 percent of the recommended education reference books in Bohdan S. Wynar's Best Reference Books: Titles of Lasting Value Selected from American Reference Books Annual, 1970-76. The library has about 75 percent of the recommended education titles in American Reference Books Annual, 1977-79; others are on order (see table 5).

In Sheehey's Guide to Reference Books* there were 212 education listings. The Lee Library's holdings include 162, or 76 percent, of these listings. Of 2,857 education titles held by the New York University**, the Lee Library has 2,571, or 90 percent.

Student Library Instruction

Provisions for student library instruction includes individualized programs, such as taped tours and library exercises, for all

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*Sheehy, Eugene P. Guide to Reference Books. Chicago: American Library Association, 1976.

**Marks, Barbara S. The New York University List of Books in Education. New York: Citation Press, 1968.

freshmen, with more specialized class presentations for students of teacher education as part of English 312, which they are required to take during their junior year. These class segments are taught by the education librarian. In addition, any professor, by contacting the education librarian, can arrange to have special library instruction for classes as the need arises. Groups of students can also request special classes covering educational materials and research methods. The education librarian will also discuss individual research problems as there is time at the reference desk or by appointment.

Library Usage

According to the Library User Survey completed by the David O. McKay Institute of Education, it is estimated that

> roughly one-third of the students visit the library one to two time per week, with another third paying three to five visits to the library. The final third reported either six to ten visits or more than ten visits per week. . . .These figures can be used to arrive at a figure which suggests that approximately 1,400 student hours are spent in the library each hour it is open.*

In an open-stack library it has been difficult to determine the exact collection usage by subject area; however, with the new circulation system, statistics are now available. Listed in table 6 are statistics for out-of-library use of education (L's and 370's), psychology (BF's and 150's), and juvenile volumes for the past seven months. Psychology and juvenile figures are included because of the high use by education students and faculty members.

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*David O. McKay Institute of Education. Library User Survey: Report of the Preliminary Data Analysis, p. 24.

Table 6

Out-of-Library Use of Education, Psychology, and Juvenile Volumes

Month	L's	370's	BF's	130's & 150's	Juvenile
January 1980*	106	678	96	509	1,708
February 1980*	131	850	149	628	1,993
March 1980*	184	1,200	203	918	2,335
April 1980*	80	580	112	452	854
May 1980*	243	1,317	207	722	1,981
June 1980*	131	489	95	213	923
July 1980*	468	1,393	147	513	1,640

*Total library circulation for the same seven months is as follows: (1) January 1980--29,559; (2) February 1980--34,726; (3) March 1980--45,685; (4) April 1980--23,449; (5) May 1980--35,032; (6) June 1980--15,263; and (7) July 1980--26,147.

Table 7 gives the circulation figures for the entire library for the years 1967-68 through 1978-79.

Table 7

Harold B. Lee Library
Use of Library Materials***

	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1979-79
Long term use:												
Faculty	16,960	17,930		20,462	21,571	22,847	33,820	28,724	27,091	20,655	21,904	20,684
Graduate student	57,932	53,846		70,396	66,931	66,637	55,147	49,333	52,677	50,112	46,704	40,552
Student and other	223,217	216,262		223,233	227,787	236,687	249,879	256,533	291,029	270,015	233,530	222,900
Total	298,109	288,038	317,768	314,091	316,289	326,171	338,436	334,590	370,797	340,782	302,138	284,136
Short term use circulated:												
Reserve	193,889	183,143	168,170	179,459	154,527	138,894	173,857	202,328	273,428	199,869*	229,164	198,976
Books (all other departments)	78,006	67,078	77,260	74,990	74,011	80,535	72,143	90,095	67,127	63,858	78,768	114,995
Microform use	60,007	76,158	95,313	110,143	109,088	108,569	108,886	102,045	100,851	273,150	310,035	224,029
Total	331,902	326,379	340,743	364,192	337,626	327,998	354,886	394,468	441,406	536,877	617,967	538,000
Total circulated use**	630,011	614,417	658,511	678,283	653,915	654,169	693,322	729,058	812,203	877,659	920,105	822,136
Noncirculated	754,136	862,515	834,797	824,010	806,417	733,305	819,260	854,205	807,604	1,171,529	1,025,496	1,266,880
Total library use	1,384,147	1,476,922	1,493,308	1,502,293	1,460,332	1,387,474	1,512,582	1,582,263	1,619,807	2,059,188	1,945,601	2,089,016
Interlibrary loan	2,374	3,166	4,053	4,549	5,340	5,551	5,967	6,460	6,220	6,504	6,771	8,502
Loaned	823	1,229	2,196	2,198	3,036	2,962	3,059	3,512	3,347	3,815	3,779	4,395
Borrowed	1,551	1,937	1,857	2,351	2,304	2,589	2,908	2,948	2,873	2,689	2,992	4,107
LRC (media use)	58,787	54,937	63,753	55,864	73,447	111,220	264,966	263,088	283,174	178,910	326,527	n/a

*Statistics for the first time without Current Periodicals use.

**Excludes non-print media use.

***Annual Report for the Harold B. Lee Library, Brigham Young University, 1978-79 (see Exhibit B-5.a.).

G.5.1 Library

Library Facilities

The library has no separate graduate facility, but special provisions are made to meet the needs of graduate students. Group study and seminar rooms are available and graduate students can reserve study carrels and lockers for the duration of their research programs. For other applicable facilities and services, please consult the detailed information provided in the basic library report.

Library Instruction

The education librarian works closely with the graduate faculty in planning and presenting library research materials and methods classes at the beginning of each semester/term and at other times as needed. In these classes particular emphasis is placed on the use of ERIC, Psychological Abstracts, Social Sciences Citation Index, the Monthly Catalog of Government Publications, and so forth, and the planning of computerized bibliographic searches in these and other relevant data bases. The education librarian and other qualified library faculty members are also involved in the actual performance of the computerized searches for graduate students.

The library provides each graduate student with a comprehensive guide to education sources, and the education librarian and other staff members are available for consultation on individual research problems.

BYU Library Compared to Other ARL Libraries

As a member of the Association of Research Libraries (ARL), the Harold B. Lee Library ranks as follows among the one hundred and ten members of the association, as taken from ARL Statistics, 1978-79:

(1)	Volumes in the library	68th.
(2)	Volumes added (gross)	65th.
(3)	Microform holdings	86th.
(4)	Current serials	59th.
(5)	Professional staff (FTE)	57th.
(6)	Nonprofessional staff (FTE)	94th.
(7)	Total staff (FTE)	57th.
(8)	Total items loaned	88th.
(9)	Total items borrowed	64th.

All information concerning Brigham Young University expenditures is considered confidential, so those rankings are not available through the Association of Research Libraries. Visiting team members will have access to these figures from the financial vice-president during their visit to the campus.

Graduate Level Materials

The subject profiles which govern the approval books sent to the library by jobbers representing the major American and many foreign publishers specify that graduate level books in all areas of education be automatically included. In addition, graduate level books and other materials requested by faculty members or discovered by checking bibliographies and other sources are added to the collections as needed.

Interlibrary Loan

In addition to their access to holdings of the Harold B. Lee Library, graduate students have special borrowing and use privileges at other Research Libraries Group (RLG) libraries, as well as complete borrowing and use privileges at all Utah college and university libraries. Interlibrary Loan Services also provide needed items through reciprocal borrowing from other libraries throughout the United States and some foreign countries.

Availability of Resources

The library is open weekdays from 7:00 a.m. to 11:00 p.m., and Saturdays from 8:00 a.m. to 11:00 p.m. During the week of finals each semester the library extends its hours of closing to 1:00 a.m. During the finals period reference services are available only at the Reserve Library reference desk from 11:00 p.m. to 1:00 a.m.

The library is staffed by adequate numbers of qualified library faculty members or assistants. Librarians often make special arrangements to meet with faculty and students at times other than normal weekday working hours in order to assist them with research or instruction problems.

Collection Assessment and Development

Many of the recommendations resulting from the recently completed Collection Analysis Project, described in more detail in the basic library report, should contribute to a needed refinement of collection development policies and procedures which will eventually result in a general upgrading of the entire collection.

EXAMPLE B

ORGANIC CHEMISTRY COLLECTION ASSESSMENT

The library's organic chemistry collection supports programs in the colleges of Biological and Agricultural Sciences, Engineering Science and Technology, and Physical and Mathematical Sciences. These colleges granted 425 degrees in 1977-78--366 bachelors, 49 masters, and 10 doctoral and instructed many students from other colleges.

Chemistry Collection Development Policies

The chemistry collection has been developed under the existing library collection Acquisition Policy Statement, approval order profiles with American, British, German, and other European dealers, and through recommendations by chemistry faculty and other library users.

Study Methodology

Since no single satisfactory method of collection evaluation exists, the subcommittee employed or studied in the literature a variety of client-centered and collection-centered techniques useful in measuring the quality of the organic chemistry collection.

Client-Centered Assessment

The client-centered assessment consisted of a personal interview with the twelve faculty members in organic and biochemistry, and two questionnaires, one developed for the McKay survey of 1978, and the other a Faculty Library Research Survey (FLRS) form given to the twelve faculty members during the interview to be filled out and returned later. Additional data was obtained from the CAP Study Team "Needs Survey of Major Academic Units."

The interviews with faculty focused on their personal use and their perception of student use of the organic chemistry collection, present and future research plans, the adequacy of library resources, and methods of developing the collection.

Results. The faculty responses show that 75 percent use the library either daily or weekly, and 92 percent find what they need over half the time. When unsuccessful, they indicate it is because the library doesn't have it or it is at the bindery. Fifty-eight percent were not hampered in their current research, but a significant 42 percent were inconvenienced. Fifty-eight percent reported student complaints about library services, and 92 percent frequently lend personal materials to students. Eighty-three percent, however, do so for convenience rather than from a lack in library collections. No respondents felt forced to restrict assignments for want of library resources.

These faculty members unanimously agree that they do not feel restricted in planning research because of a lack of library resources, 30 percent do not include provision for library materials in proposals for research grants, and only half were even moderately affected by library collections in their decision to join the faculty or to remain at the university. At the same time, 42 percent rely greatly and 58 percent moderately on their personal libraries in addition to the library collection.

The departmental library representative is perceived by 83 percent as having significant collection development functions and all of them recommend library acquisitions through him. All agree that the materials they recommend are usually purchased when funds are available, and most are pleased with ILL services.

The questionnaire returned by ten of the twelve faculty members was the same form used in the McKay Institute user survey in 1978 in which nineteen faculty members from the Chemistry Department responded. It was decided to use the same instrument to see how the organic chemistry faculty compared in their assessments of the chemistry collection to the department as a whole.

In comparison with other university libraries, the respondents rated the BYU library chemistry collection as inferior, 54 percent; equal, 29 percent; superior, 17 percent. The McKay survey showed 48 percent, 32 percent, and 20 percent respectively. Both survey groups rated the chemistry collection fair to good in current books and journals, annual reviews, indexes, bibliographies, reference books, and books and journals over ten years old. However, a significant minority (10 percent) of the users of the chemistry collection considered it inadequate or poor in current books and journals and in journals over ten years old. Ninety percent of both groups believe the library should have a good or excellent collection of all types of recent materials (less then ten years old).

Figure 7.1 shows the degree of adequacy of the chemistry collection for various user groups as perceived by respondents to the McKay survey and the faculty library research survey (FLRS).

FIGURE 7.1

ADEQUACY OF THE CHEMISTRY COLLECTION FOR USER GROUPS

	Inadequate		Poor		Fair		Good		Excellent	
Groups	McKay	FLRS	McKay	FLRS	McKay	FLRS	McKay	FLRS	McKay	FLRS
Undergraduates	0	0	10	10	10	10	38	70	42	10
Masters Candidates	5	10	5	0	16	30	74	60	0	0
Ph.D. Candidates	10	10	6	0	37	40	47	50	0	0
Faculty	10	10	5	0	37	40	49	50	0	0

(Numbers show percentages of respondents)

Figure 7.2 shows the most frequently listed problems users have had with the chemistry collection as reported by respondents to the two surveys.

FIGURE 7.2

MOST FREQUENTLY LISTED PROBLEMS WITH THE CHEMISTRY COLLECTION

Problem	McKay Survey	FLRS
Journals gone too long or sent too quickly for binding	95	100
Not enough journals	74	100
Not enough books	47	60
Time lag between ordering and receiving books and journals	42	60
Misfiled books and journals	26	60

(Numbers show percentages of respondents)

Collection-Centered Assessment

Within the Dewey 540s and the Library of Congress QDs there are three major areas which support organic chemistry. The shelf list measurements and the divisions used for periodical and reference counts were general chemistry (540s and QD3s), analytical chemistry (544s and QD75s), and organic chemistry (547s and QD1s). General materials were included because they contain introductory material, guides, reference tools, and periodicals important to the organic courses. Analytical materials are, by the nature of chemistry, also preoccupied with organic compounds.

Results. The shelf list contained 33.75" of cards in the above catagories, which at 125 cards per inch would equal 4,180 titles. Of these, 18.25" or 2,280 titles (54 percent) were in general chemistry, 6.5" or 800 titles (19 percent) in analytical, and 9" or 1,100 titles (27 percent) in organic.

The chemistry periodical holdings were compared with the chemistry section of Ulrich's International Periodicals Directory, 17th edition, 1977-78. Reference works were compared to R. T. Bottle's The Use of Chemical Literature, 1969. Both lists attempt to include all available titles. Bottle provides evaluative comments on some titles, and the library holds some of both the well-liked (though not always in current editions) and the less prized.

The percentages on the right of Figure 7.3 show BYU library holdings in comparison with the comprehensive lists and should not be viewed as especially low since any library should only have selected items from the lists depending on the academic and research programs it supports.

The percentages of holdings bear out the importance of the organic field, since the most involved work and the broadest scope are found in this area of chemistry. It may seem alarming to have such low percentages in the less organic areas of the collection, but one organic chemistry faculty member defended the results as desirable. However, further assessment of Chemistry Department needs in the

FIGURE 7.3

LIST CHECKING DATA

	Titles in Ulrich's	Percentage of Total Titles	Titles at BYU	Percentage of Total Titles	Percentage of Ulrich's Titles at BYU
Total Titles	389	100	116	100	30
General	288	74	76	66	26
Analytical	43	11	16	14	37
Organic	58	15	24	20	41

	Titles in Bottle	Percentage of Total Titles	Titles at BYU	Percentage of Total Titles	Percentage of Bottle's Titles at BYU
Total Titles	199	100	87	100	44
General	126	63	36	41	29
Analytical	19	10	11	13	58
Organic	54	27	40	46	74

other areas should be done. The data also shows that, because of the size of the general chemistry collection, it would cost much more to increase the percentage of holdings on either of the lists than it would in organic chemistry.

Of greatest concern is the level of the periodical holdings. The apparently high percentage of general periodicals is inflated by the fact that many essentially organic titles are general enough to be classed in the 540.5s. While this could increase the organic percentage to perhaps 60 percent, it would not change the total percentage of 30.

Recommendations

1. Conduct further studies of all aspects of the chemistry collections, using additional client- and collection-centered techniques to verify and further examine the findings of this study.
2. Using the data obtained from the additional studies, determine whether a redistribution of budgets from approval program and monograph purchases is appropriate or necessary to provide additional journal subscriptions.
3. Study binding policies to discover whether changes could improve the accessibility of current journals.
4. Conduct a periodicals use study, such as that done for education periodicals, to determine which titles might be considered for weeding and which titles should be purchased.
5. Implement a faculty-assisted weeding program to improve the utility and accessibility of materials.

EXAMPLE C′

A Sample Evaluation Summary

SUL Collection Development Office
Collection Evaluation Summary

L. Golomb, 1976

Anthropology: Adequacy and Availability of the Collections at Stanford

Departments/ Fields:
Anthropology
Sociology
History
Economics

Sampling: 250 titles based on titles in Anthropology Graduate field and course bibliographies.

Findings: Stanford possesses 249 of the 250 titles checked (over 99%). 236 titles were found in the Main Library, and 13 uniquely in branch libraries. Three titles (1%) were never located and were presumed missing.

During a busy-period shelf check, 84% of the titles were available on the shelves of one or more campus libraries; another 14.4% were in circulation and could readily be recalled. Main Library use, considered alone, was more intense: of 348 copies of the Main Library's 236 titles, 57.5% were available on the shelves during the busy-period check, 28.7% were on loan, and 13.8% were unavailable (or could not be found).

There have been complaints of low-availability of high-priority Social Science materials in the Stanford libraries. Data from this study would suggest that these complaints are ill-founded, and that the problem may be elsewhere: problems perceived by the social science user in negotiating the system to find his book. Many users in these fields may possess inadequate bibliographic or library instruction, or may lack the patience to seek materials in decentralized locations. This study indicates that a user-orientation and training program should be developed for Social Science patrons—especially graduate students—in bibliography and library use. The effect of such a program may well be the better and fuller use by library patrons in this broad area.

APPENDIX A

Agencies Accrediting Academic Programs at BYU

Agencies Accrediting Academic Programs at BYU

Brigham Young University (Initial Accreditation--1923; Renewal--1976)

Northwest Association of Schools and Colleges
Commission on Colleges
3700-B University Way, N.E.
Seattle, WA 98105
Tel. (206) 543-0195

Business (Accredited)

American Assembly of Collegiate School of Business
Accreditation Council
11500 Olive Street Road
St. Louis, MO 63141
Tel. (314) 872-8481

Dietetics (Preaccredited)

The American Dietetic Association
Commission on Evaluation of Dietetic Education
Department of Education
430 North Michigan Avenue
Chicago, IL 60611
Tel. (312) 280-5000

Engineering Education (Accredited)

Engineers' Council for Professional Development
34 East 47th Street
New York, NY 10017
Tel. (212) 644-7685

(Chemical, Civil, Electrical, Mechanical)

Engineering Technology (Accredited)

Engineers' Council for Professional Development
345 East 47th Street
New York, NY 10017
Tel. (212) 644-7685

(Design and Graphics Technology, Electronic Technology, Manufacturing Technology)

Librarianship (Accredited)

American Library Association
Committee on Accreditation
50 East Huron Street
Chicago, IL 60611
Tel. (312) 944-6780

Marriage and Family Therapy (Accredited)

American Association for Marriage and Family Therapy
Commission on Accreditation for Marriage and Family Therapy Education
924 West Ninth Street
Upland, CA 91786
Tel. (714) 981-0888

(Therapy-Clinical Training Programs)
(Graduate Degree Programs)

Medical Technology (Accredited)

American Medical Association
Committee on Allied Health Education and Accreditation
535 North Dearborn Street
Chicago, IL 60610
Tel. (312) 751-6272

(National Accrediting Agency for Clinical Laboratory Sciences)

Music (Accredited)

National Association of Schools of Music
11250 Roger Bacon Drive, Suite 5
Reston, VA 22090
Tel. (703) 437-0700

Professional Nursing (Accredited)

National League for Nursing, Inc.
Board of Review for Baccalaureate and Higher Degree Programs (or)
Board of Review for Associate Degree Programs
10 Columbus Circle
New York, NY 10019
Tel. (212) 582-1022

(Associate Degree—Accredited; Baccalaureate & Higher Degree—Accredited)

Psychology (Clinical Psychology—Accredited)

American Psychological Association
Committee on Accreditation
1200 17th Street, N.W.
Washington, D.C. 20036
Tel. (202) 833-7692

Social Work (Accredited)

Council on Social Work Education
Commission on Accreditation
Division of Educational Standards and Accreditation
345 East 46th Street
New York, NY 10017
Tel. (212) 697-0467

Speech, Pathology, and Audiology (Accredited)

American Speech-Language-Hearing Association
American Boards of Examiners in Speech Pathology and Audiology
Education and Training Board
10801 Rockville Pike
Rockville, MD 20852
Tel. (301) 897-5700

Teacher Education (Accredited)

National Council for Accreditation of Teacher Education
1919 Pennsylvania Avenue, N.W.
Washington, D.C. 20006
Tel. (202) 393-2220

Theater Arts

National Association of Schools of Theatre
1000 Vermont Avenue, N.W.
Washington, D.C. 20005

APPENDIX B

ALA Standards for University Libraries

Standards for University Libraries

FOREWORD

The following statement of university library standards has been prepared by a joint committee established by the Association of Research Libraries and the Association of College and Research Libraries. A draft of the statement appeared in the April 1978 issue of *College & Research Libraries News*.

In August 1978, the Joint ARL-ACRL Committee on University Library Standards revised this draft. On October 26, 1978, the ARL membership unanimously endorsed the statement as revised. At the ALA Midwinter Meeting in January 1979, the ACRL Board also voted to ratify the revised statement. "Standards for University Libraries" is being published in its final form in this issue of *C&RL News* for the information of ACRL members.

STANDARDS
FOR UNIVERSITY LIBRARIES

Prepared by a joint committee of the Association of Research Libraries and the Association of College and Research Libraries, a division of the American Library Association.

Introduction

These standards have been prepared to assist faculty, university administrators, librarians, accrediting agencies, and others in the evaluation and improvement of university library services and resources. These statements are intended to apply only to those institutions of higher education which have been characterized by the Carnegie Commission on Higher Education as "doctoral granting institutions."[1] All of these institutions emphasize graduate study, professional education, and research. Despite these basic similarities, university libraries are also characterized by a high degree of individuality, particularly with respect to policies, programs, responsibilities, and traditions. Hence, these standards are not intended to establish normative prescriptions for uniform application. Rather, they are meant to provide a general framework within which informed judgment can be applied to individual circumstances.

The fundamental assumption of these standards is that the library has a central and critical importance in a university. This importance has been recognized repeatedly by analysts of higher education. In his 1966 report to the American Council on Education, Allan M. Cartter, for example, stated:

"The library is the heart of the university; no other single non-human factor is as closely related to the quality of graduate education. A few universities with poor library resources have achieved considerable strength in several departments, in some cases because laboratory facilities may be more important in a particular field than the library, and in other cases because the universities are located close to other great library collections such as the Library of Congress and the New York Public Library. But institutions that are strong in all areas invariably have major national research libraries."[2]

As with all institutions, universities and their libraries have experienced considerable change over time. Further changes are taking place now, and others clearly lie ahead. Particularly noteworthy is the increasing sense of interdependence and commitment to coordination among universities generally. With regard to university libraries, the following developments are particularly important: the growth of interlibrary cooperation, especially resource sharing; the strengthening and expansion of service programs, such as bibliographic instruction; the increasing importance of recorded information in nonprint formats; the application of automated systems to library operations and the growth of machine-readable data bases; the closer interaction between librarians and faculty and the improved status of librarians within the university; increased stress on the effectiveness and efficiency of operations. A recognition of such trends and their importance is fundamental to these standards.

Recognizing the increasing interdependence of universities in developing and maintaining scholarly resources, these standards are intended to provide guidance in identifying that level of library self-sufficiency which is essential to the health and vigor of a university and its academic programs. The general assumption is that the primary obligation of a university library is to meet the instructional and research needs of the students and faculty at that university. However, no university library can acquire all of the recorded information that its clientele may find useful. An attempt is made, therefore, to recognize the mechanisms being developed to promote cooperative access to scholarly information, to identify the current limitations of interdependence, and to enumerate the factors which are essential in maintaining an environment in which instruction and research can flourish.

Care has been taken to limit the standards to succinct statements focusing on the elements judged to be most critical in determining the adequacy of a university library. Amplification of the principles identified in the standards is provided in the form of commentary.

SECTION A: SERVICES

Standard A.1

In order to support the instructional, research, and public service programs of the university, the services offered by a university library shall promote and facilitate effective use of recorded information in all formats by all of the library's clientele.

Commentary on Standard A.1

In developing and implementing its program of service, a university library should give priority to the needs of the students, faculty, and other academic staff of the university, who may be said to constitute the library's "primary clientele." While it may also have obligations or commitments to other clienteles or constituencies, the library should recognize that these are secondary.

A university library should provide the following services: reference and information services which are available at adequately identified and designated points during established service hours; specialized and in-depth assistance to individuals in the use of the library's resources; bibliographic instruction programs; services which will facilitate access to nonprint media and machine-readable data bases; and services which will facilitate access to recorded information in other library collections.

These services should be designed to meet effectively the whole range of different informational and bibliographical needs that arise in the various academic areas and in all other parts of the university.

While universities should place great emphasis on meeting the intensive library needs of graduate students and faculty, they should be careful to provide adequately for the needs of undergraduate students.

Finally, university libraries should recognize that, to one degree or another, they share a responsibility with all research libraries to support higher education in general and each other in particular through cooperative efforts.

Standard A.2

In order to ensure maximum access to its collections and their contents, a university library shall maintain records of its collections which are complete, consistent, and in conformity with national bibliographical standards and requirements.

Commentary on Standard A.2

The extent of bibliographical coverage that must be provided in a particular library will depend on many factors, such as whether or not the library has open or closed access stacks, the extent and nature of the library's specialized collections, the history and traditions of the library and of the university, and the nature of specific cooperative arrangements that the library may have entered into with other libraries and library consortia.

To ensure effective access to its collections as well as to increase its operational efficiency, a university library's bibliographic records should conform to recognized standards of cataloging and classification, and its bibliographic apparatus should be internally consistent. Its bibliographic records should be adjusted in conjunction with periodic inventories of the collections. Every multi-unit university library should have a union catalog of its cataloged holdings.

Standard A.3

Within the limits of the university's particular responsibilities and priorities, a university library shall provide maximum access to its collections for all of its clientele.

Commentary on Standard A.3

Various factors are involved in providing access to a library's collections, such as circulation policies and procedures, service hours, security arrangements, and actual operating efficiency. While practices vary significantly from library to library, certain principles should be followed in each library. Most items in the library collections should be readily available both for consultation in the library and for circulation to authorized clientele. Access to and circulation of rare, fragile, and high-demand materials should be appropriately controlled and restricted. To ensure maximum availability of the collections to those authorized to use them, terms of loan should be carefully set and should generally be similar for all user categories.

Adequate precautions should be taken to control loss of or damage to the library's collections. The prompt return in good condition of all circulated materials should be effectively enforced for all borrowers.

Circulation procedures and stack maintenance operations in a university library should be effective and efficient. There should be a regular and continuing program of shelf reading. Library service hours should be responsive to high- and low-use periods, to the number of branch, departmental, and other special libraries in the system as well as to the availability of alternative study space.

SECTION B: COLLECTIONS

Standard B.1

A university library's collections shall be of sufficient size and scope to support the university's total instructional needs and to facilitate the university's research programs.

Commentary on Standard B.1

A university library should provide all of the resources that are necessary for direct support of

B.1

College and Research Libraries News, Apr 1979.

the university's full instructional programs at both the undergraduate and the graduate levels. If these resources are not readily available in the library, the instructional programs cannot be carried out successfully. These resources include required and assigned readings, reference and bibliographical materials, basic journals and serials, as well as any other library materials that undergraduate or graduate students are expected to be able to consult readily in their courses of study, or in the preparation of theses and dissertations.

Weak collections can hamper research. The accumulation and preservation of substantial collections and the implementation of comprehensive acquisition programs must be recognized as providing a resource whose presence within a university is essential to the conditions under which knowledge is effectively increased and transmitted. It is clear that no university library can be expected to possess in its collections all of the recorded information which faculty or doctoral students may need to consult as they pursue their research. Nevertheless, it is essential that collections be of such size, scope, and quality that they promote rather than restrict research. While every library should take care to develop collections whose areas of concentration reflect and support the academic priorities and strengths within the university, interlibrary arrangements, which have long been established for the mutual support of exceptional research needs, must continue to be relied upon to supplement even the most comprehensive research collections.

The continued rapid growth of scholarly literature and the costs of providing access to this literature for those in the university community have necessitated formal and informal arrangements among libraries to ensure maximum access to this literature. Common methods of sharing resources and improving access have been loans between libraries, provision of visiting privileges for scholars, agreements on the acquisitions of materials, and sharing of bibliographic information.

While interlibrary cooperation, as presently practiced, may not promise large cost savings in the immediate future, significant improved methods of supplementing local resources are in the active planning stages. University libraries must participate in the development of these new access mechanisms to ensure that local, regional, national, and international interests are effectively served.

Attempts have been made to identify precise quantitative measures of adequate collection size and growth rates for a university library. No such formula has yet been developed which can be generally applied. At present, such formulas as exist can only yield approximations which indicate a general level of need. If they are applied arbitrarily and mechanically, they can distort the realities of a given situation. Nevertheless, quantitative measures are increasingly important in guiding the qualitative judgment that must ultimately be applied to university libraries and their collections. One technique is the use of regression analysis to facilitate the comparison of similar libraries to one another;[3] another of some general applicability is the "index of quality" developed by the American Council on Education for relating library collection size to graduate program quality.[4]

Standard B.2

A university library's collections shall be developed systematically and consistently within the terms of explicit and detailed policies.

Commentary on Standard B.2

Given the great breadth of university library collections and the wide variations in depth of collections among subjects held, it is essential that there be a collections development policy to guide the selection and acquisition of materials.

By establishing such a policy, librarians seek to ensure that the library's collections are planned and developed in relation to the university's academic, research, and service goals and priorities and within the limits of resources available.

Working in close consultation with faculty and administration, librarians, particularly subject specialists, should assume the responsibility for drafting and implementing this policy.

Recognizing the inherent difficulties in collection development, it is imperative that the library have full and continuous access to information about all developments, actual and planned, in the academic, research, and service programs of the university and its components which affect the library.

Once codified, the library's collection development policy should be made known to and endorsed by the university faculty and administration. To ensure that this policy reflects changes within the university, the policy should be regularly and carefully reviewed.

Standard B.3

A university library's collections shall contain all of the varied forms of recorded information.

Commentary on Standard B.3

The university library has traditionally been recognized as the repository within the university for the printed information needed to support the university's instructional and research programs. As recorded information becomes increasingly available in a variety of nonprint formats, such as films, sound recordings, and video tapes, it is appropriate that this material, except where needed exclusively for classroom use, also be acquired, organized, and made available through the university library.[5]

SECTION C: PERSONNEL

Standard C.1

A university library shall have a sufficient number and variety of personnel to develop, organize, and maintain such collections and to provide such reference and information services as will meet the university's needs.

Commentary on Standard C.1

The size of a university library's staff is determined by many factors, including the number of physically separate library units, the number of service points requiring staff, the number of service hours provided, the number and special characteristics of items processed annually, the nature and quality of the processing to which they are subjected, the size of the collections, and the rate of circulation of the collections. Interinstitutional cooperative arrangements may also affect staff size. As such factors vary widely from one institution to another, no single model or formula can be provided for developing an optimum staff size.

A university library should have on its staff a variety of personnel: professional, clerical, and student-assistant staff. The librarians should perform the core academic and professional functions of the library: collection development, reference and information services, and substantive activities related to the bibliographic control of materials. All categories of personnel should have appropriate education and experience, including, when necessary, graduate or professional degrees in their particular specialties. The recognized terminal degree for librarians is the master's degree from an American Library Association accredited library school program, although additional graduate degrees may sometimes be desirable.

The deployment of personnel within a specific university library is related to the range of operations and services provided by that library and to its total workload requirements.

Standard C.2

Personnel practices within a university library shall be based on sound, contemporary administrative practice and shall be consistent with personnel practices within the university as well as the goals and purposes of the library.

Commentary on Standard C.2

The terms and conditions of employment of the several categories of staff in a university library should be consonant with the established terms and conditions of employment of staff in related categories elsewhere within the university. Terms and conditions of employment for librarians, for example, should parallel those of the rest of the university's academic staff, just as terms and conditions of employment for the library's clerical and student staff should parallel those of similar employees within the university as a whole.

A comprehensive university library personnel management program should address recruitment, appointment, promotion, tenure, dismissal, appeal, definition of position responsibilities, classification and pay plans, orientation and training programs, review of employee performance, staff development, and counseling.

More specific guidance on these matters is provided in the following documents: "Statement on Faculty Status of College and University Librarians"[6] and "Library Education and Personnel Utilization."[7]

SECTION D: FACILITIES

Standard D.1

A university library shall have facilities which meet the present and anticipated future requirements of the university and its programs.

Commentary on Standard D.1

A university library's buildings should be of sufficient size and quality to house the collections and to provide sufficient space for their use by students, faculty, and other clientele. There should also be adequate space for the library operations necessary for the provision of its services. Adequacy of facilities cannot be determined simply on the basis of present requirements. The size and composition of the university's enrollment, the nature of its instructional and research programs, the form and publication rate of library materials strongly influence library requirements, and it is necessary that these requirements be subject to continuous evaluation and planning.

A university library should be attractive, inviting, and carefully designed to promote operational efficiency and effectiveness of use. Specific factors relevant here include general environmental features that affect clientele, staff, and collections (light, ventilation, temperature and humidity control, vertical and horizontal transportation, safety features, etc.), layout of the stacks, number and variety of reader stations, relationship between stacks and reader stations, relationship among service points, effective flow of materials, and adequacy of space for staff and operations.

The fundamental consideration in designing a library building should be its function. Since the nature of collections, services, operations, and the needs of a library's clientele can change significantly over time, present and future flexibility is an important element in library design. Although the architectural style and traditions of a university may dictate certain design features for a library building, such factors should not be allowed to compromise basic functional considerations.[8]

Standard D.2

Libraries shall be so located that the university community will have convenient access to them.

Commentary on Standard D.2

The requirements of interdisciplinary studies and research, recognition of the needs of undergraduate students, the urgency of achieving operating economies—these and other factors have revived interest in centralizing physically dispersed library units in order to improve access to resources and avoid costly duplication in the development and maintenance of collections. There are circumstances, however, such as campus geography, intensity of use, and size of collections which may continue to justify the maintenance of multiple library units. Remote storage facilities may also be established in attempting to deal with space inadequacies although this usually inhibits convenience of access. Where the pattern of decentralization persists in any form, it is important that libraries be located so as to minimize inconvenience to all library users.[9]

SECTION E: ADMINISTRATION AND GOVERNANCE

Standard E.1

The place of the university library within the administrative and governance structure of the university shall be clearly identified, and the responsibilities and authority of the library administration and its chief administrative officer shall be defined.

Commentary on Standard E.1

If there is ambiguity within the university community as to the particular place occupied by the library within the administrative and governance structure of the university, and if the authority and responsibilities of the library's chief administrative officer are not clearly identified, misunderstanding, conflict, and confusion can sometimes result to the detriment of both the university and its library. Because it is closely related to instruction and research, the university library should be formally recognized as one of the major academic units within the university, and its chief administrative officer should participate regularly and directly in university-wide academic planning and decision making. For similar reasons, this person should report directly to the chief academic officer of the university.

The long-recognized need in institutions of higher education to involve faculty in library matters has led to the institutionalization of the advisory library committee. Because of the fundamental importance of the library to instruction and research and the consequent need for close, continuing interaction between the faculty and the library, the existence of the library committee is valuable. The committee should be advisory, and its responsibilities should be clearly delineated.

Standard E.2

The university library's own administrative and governance structure shall be clearly specified and shall be consonant with the governance structure of the university as well as with the particular needs and requirements of the library.

Commentary on Standard E.2

In order to facilitate effective organizational activity and decision making, it is essential that the administrative and governance structure of the university library itself be clearly specified. This will involve identifying the roles and responsibilities of all categories of library personnel in the governance of the library. It is essential that library governance reflect the principles and practice followed elsewhere within the university, although they should be modified as necessary to embody those conditions and issues peculiar to an academic library.

Standard E.3

There shall be a close administrative relationship among all libraries within the university to the end that library users may make full and effective use of library resources and services.

Commentary on Standard E.3

No single pattern of library administration will serve all universities equally well, but whatever pattern an institution chooses should have as its principal purpose the equitable distribution of library resources and services. The needs of scholars differ from discipline to discipline and often the needs of students differ from those of faculty. These competing interests cannot always be reconciled, but one important task of library administration is to achieve as much balance as possible in the provision of services to all groups.

However administrative relationships among library units within a university are determined, it is essential that adequate coordinating mechanisms be established and enforced to ensure that service policies are in reasonable harmony, that costs related to duplication are controlled, and that access to all library collections is maximized.

Standard E.4

A university library's major policies and procedures shall be clearly defined and regularly reviewed.

Commentary on Standard E.4

In order to ensure that it is effective internally and understood externally, a university library should clearly define its major policies and procedures and record them in written form. The written statements of policy should be readily available to all members of the library staff, and policies which have external relevance (such as the library's collection development policy or circulation policy) should be accessible to the library's clientele and to others who may need or desire to consult them. These policies, as well as the practices that implement them, should be regularly reviewed to ensure that they continue to be appropriate.

SECTION F: FINANCE

Standard F.1

Budgetary support for the university library shall be sufficient to enable it to fulfill its obligations and responsibilities as identified in the preceding standards.

Commentary on Standard F.1

The total budgetary needs of a university library can be determined only in relation to its responsibilities. Many attempts have been made to develop formulas or other "objective" measures for determining the budgetary requirements of a university library. These measures range from matching funding with student enrollment to defining a minimum percentage of the total university G and E budget which should be devoted to the library. Such "objective" approaches to budget determination do not always take cognizance of the range and complexity of demands which any university library must meet, as well as the significantly different library needs of different universities.

These conditions also make it impossible to identify a viable model that can be applied to all university libraries for allocating their budgets by major category (salaries and wages, acquisitions, binding, miscellaneous supplies, and other expense). Allocation ultimately depends on local requirements and priorities. For example, if a university library is expected to operate a substantial number of discrete units with parallel and duplicative activities, its expenditures for salaries and wages will be higher than if this were not the case.

Under any circumstances, it is essential that a university library be provided with sufficient funding to enable it to develop appropriate collections, provide appropriate services, carry out necessary operations, and satisfy identified expectations and requirements. If funding is less than is necessary to fulfill these obligations, the library will be unable to meet university needs.

A university library should be expected to operate on a sound financial basis. To do this, the library and its administration must be able to identify and support its fiscal request effectively and to report adequately on expenditure of funds.

Standard F.2

The university library budget shall be a distinct part of the university's budget, and it shall be developed and managed by the chief administrative officer of the university library.

Commentary on Standard F.2

The authority to prepare, submit, defend, and administer the university library budget should be delegated clearly and explicitly to the chief administrative officer of the university library. He or she should have full responsibility for managing this budget as well as the authority necessary to maximize the use of the library's total resources. He or she should have the same degree of latitude and responsibility that is exercised by other major administrative officers within the university. The library should be responsible for preparing adequate and regular reports on expenditures throughout the year. These reports should conform to the university's requirements and, where necessary, to its standardized procedures and practices.

Because of the importance of the library within the university and the need that it respond effectively to changing demands, priorities, and academic programs, it is essential that the library budget be developed in relationship to and with full cognizance of the total university budget-planning process, and that the library's chief administrative officer be directly and significantly involved in this process.

REFERENCES

1. Carnegie Commission on Higher Education, *A Classification of Institutions of Higher Education* (Berkeley, Calif.: The Commission, 1973), p.1–2, 9–22. This publication identifies 173 "doctoral granting institutions."
2. Allan M. Cartter, *An Assessment of Quality in Graduate Education* (Washington, D.C.: American Council on Education, 1966), p.114.
3. William J. Baumol and Matityahu Marcus, *Economics of Academic Libraries* (Washington, D.C.: American Council on Education, 1973).
4. Cartter, *An Assessment of Quality in Graduate Education*, p.114.
5. The best recent discussion of the importance of nonprint media for higher education is Carnegie Commission on Higher Education, *The Fourth Revolution: Instructional Technology in Higher Education* (New York: McGraw-Hill, 1972).
6. In *Faculty Status for Academic Librarians: A History and Policy Statement* (Chicago: American Library Assn., 1975), p.35–38.
7. "Library Education and Personnel Utilization" (Chicago: American Library Assn., 1976).
8. Considerable valuable information is available in several publications, the best of which remains Keyes D. Metcalf, *Planning Academic and Research Library Buildings* (New York: McGraw-Hill, 1965).
9. This issue has been the subject of considerable

analysis. See, particularly, Ralph E. Ellsworth, *The Economics of Book Storage in Academic Libraries* (Metuchen, N.J.: The Association of Research Libraries and the Scarecrow Press, 1969). Also useful is Jeffrey A. Raffel and Robert Shishko, *Systematic Analysis of University Libraries* (Cambridge, Mass.: MIT Press, 1969).

Appendix

Quantitative Analytical Techniques for University Libraries

The university libraries[1] to which quantitative measures might be applied are so complex, so diverse in the programs they support, and so different from each other that it is extremely difficult, if not impossible, to devise a common statistical measure which could be applied to all of them. This problem is further complicated by the character and inadequacy of the currently available data. Herman Fussler, for example, observes that "libraries, like universities, tend to have very inadequate analytical data on their own operations and performance. Such data, especially as they relate to costs and system responses to user needs, are critically important in any effort to improve a library's efficiency and responsiveness."[2] Fritz Machlup, in the course of his recent efforts to measure the holdings and acquisitions of libraries on a broad scale, has complained about the lack of adequate data.[3] Other observers have challenged the utility of present library data collection.[4] They focus on perceived failures to measure performance or effectiveness. Nevertheless, academic institutions do compete for faculty and students, and one of the elements in this competition is the adequacy of library services and collections. Comparative judgments about academic libraries are made, and these comparisons can be aided by quantitative measures.

Unfortunately, much of the data which are needed to actually make interinstitutional comparisons is not easily available, although some useful data can be obtained from ARL statistics. The LIBGIS and HEGIS surveys also supply data, but these are usually too old for current needs or in a form which is difficult to use. Consequently, the analyst is compelled to rely on what is available: ARL statistics, authorities who have written on the subject, and such limited surveys as he or she can make. All of these methods have varying degrees of utility, but with the possible exception of the ARL data, none provide the raw data on which empirically derived measures can be based. Certain "common" practices can be discerned, and the advice of authorities can be weighed, but these, however valuable, do not constitute quantitative measures in an empirically derivable, logically justifiable sense. To have reliable quantitative measures, the categories to be measured must be defined, and a mechanism for gathering the necessary data must be developed.

In the absence of either of these necessary conditions, it is difficult to do more than perform what analyses can be performed on ARL data. Briefly, these fall into three categories: (a) insights obtained by simple inspection of the data; (b) the construction of ratios which reduce the quantity of data to be comprehended and facilitate comparison; and (c) regression analysis which performs roughly the same function from the analyst's point of view as the construction of ratios but also requires an effort on the part of the analyst to group like institutions together and gives the analyst some indication of how well this has been accomplished (coefficient of determination).

Simple inspection of ARL data, aided by rankings, ranges, averages, and medians, does provide useful insights for the experienced library manager who can mentally discount obvious discrepancies and differences between institutions and can restrict comparisons to a homogeneous group. However, to read, for example, that in 1976–77 the number of volumes in ARL libraries ranged between Harvard's 9,547,576 and McMaster's 906,741, that the average library held 2,127,047, and the median was 1,653,000 may give the reader a sense of perspective, which is valuable, but it is of limited use in drawing comparisons between rather different institutions.

A reduction of data can be achieved by the use of ratios or percentages, as is shown in the example of ratio analysis below. Some of those which can be generated from existing data include:

1. The ratio of professional to nonprofessional staff
2. Expenditure for library materials as a percent of total library operating expenditure
3. Ratio of salary expenditures to library material expenditures

This kind of data reduction aids analysis by making the data more comprehensible. For example, among ARL libraries in 1976–77, the ratio of professional to nonprofessional staff ranged from 1.08 to 0.24; the average was 0.51 and the median 0.49. The overwhelming majority of libraries tended toward a pattern of one professional to two nonprofessionals. Among ARL libraries in 1976–77, expenditures for library materials as a percent of total library expenditures ranged from 19.14 percent for Toronto to 50.61 percent for Houston. The average was 31.46 percent and the median 30.09 percent. The vast majority of ARL libraries tended to spend 30 percent of their budgets on acquisitions. The obverse of materials expenditure for libraries is salary expenditure. Expressed as a ratio of salary to materials it ranged from 3.6 in the case of Toronto, to 0.8 in the case of Houston, with the median 1.9 and the average 1.93.

From ratios such as these, a deeper insight into library operations can be obtained, but it would be rash to conclude that all libraries should spend 30 percent of their budgets for books and 60 percent for salaries or that the ratio of professional to nonprofessional should always be 1:2. Local conditions dictate differing policies. A library with many branches may require a higher ratio of professionals to nonprofessionals. Conversely, differing operating conditions, different types of staffing may dictate different ratios. An example of a more extended kind of ratio analysis is that of Allan Cartter's Library Resources Index, which is described in a following section. Yet, even this kind of ratio should be viewed cautiously. At best, ratio analysis can serve only as a background against which local conditions may be evaluated.

Regression analysis also provides a form of data reduction, but it compels the analyst to attempt to group like institutions together. Baumol and Marcus provide a guide to its use in library data analysis.[5] The concluding section of this appendix gives an example of its application. But the same caveats about drawing inferences that apply to ratio analysis apply to regression analysis.

In addition to these, there is a growing literature on performance evaluation of libraries which is expressed in various ways. F. W. Lancaster summarizes some of the possible approaches:

"1. The ability of the library to deliver a particular item when it is needed.

"2. The ability of the catalog and the shelf arrangement to disclose the holdings of particular items or of materials on particular subjects.

"3. The ability of reference staff to answer questions completely and accurately.

"4. The speed with which a particular item can be located when needed.

"5. The speed with which a reference inquiry can be answered or a literature search conducted and the results presented to the library user.

"6. The amount of effort that the user must himself expend in exploiting the services of the library (including factors of physical accessibility of the library and its collections, the size and quality of the library staff, and the way in which the collections are cataloged, indexed, shelved and signposted."[6]

Performance measures are, however, still in the early stages of their development. They may eventually prove to be extremely important to libraries, but they are likely to be most useful in making intrainstitutional rather than interinstitutional decisions. In sum, there are no simple solutions, no ready panaceas, no easily available substitutes for intelligent analysis of available data.

Example of Ratio Analysis

Table 1 below demonstrates the application of ratio analysis to library materials expenditures as a percentage of total library operating expenditures. It is based on the latest (1976–77) ARL data. For the sake of brevity and because this is simply used as an example, only twenty of the total applicable ninety-three institutions have been included.

The Library Resources Index

The Library Resources Index is a specialized index devised by Allan M. Cartter and published

TABLE 1
LIBRARY MATERIALS EXPENDITURES AS A PERCENTAGE OF TOTAL LIBRARY OPERATING EXPENDITURES (VALUE) FOR TWENTY UNIVERSITY LIBRARIES, 1976–77

Rank Order Number	Institution Number	Institution Name	Value
1	31	Houston	50.61
2	3	Arizona	44.63
3	82	Texas A & M	44.05
4	87	VPI & SU	42.84
5	81	Texas	42.69
6	28	Georgia	42.21
7	35	Iowa	42.15
8	71	South Carolina	42.06
9	68	Rice	41.67
10	42	Louisiana State	40.19
11	20	Connecticut	40.04
12	60	Oklahoma State	39.51
13	53	Nebraska	39.30
14	80	Tennessee	39.22
15	52	Missouri	38.93
16	4	Arizona State	38.62
17	22	Dartmouth	38.30
18	24	Emory	38.23
19	1	Alabama	38.08
20	57	Notre Dame	37.87

TABLE 2
The Library Resources Index Applied to Twenty ARL Libraries, 1976–77

Rank Order Overall Index	Institution Name	Total Volume Index	Volumes Added Index	Serials Index	Overall Library Resources Index
1	Harvard	4.49	2.25	3.89	3.54
2	Illinois	2.74	1.95	3.43	2.71
3	Yale	3.24	2.40	2.44	2.69
4	Calif., Berkeley	2.31	1.75	3.90	2.65
5	Texas	1.91	2.87	2.41	2.39
6	Indiana	2.07	2.39	1.71	2.05
7	Columbia	2.22	1.57	2.31	2.03
8	Michigan	2.31	1.81	1.92	2.02
9	Stanford	2.05	1.67	2.13	1.95
10	Toronto	1.87	2.15	1.66	1.90
11	Calif., Los Angeles	1.84	1.44	2.26	1.84
12	Washington	1.52	2.16	1.64	1.77
13	Cornell	1.87	1.33	2.08	1.76
14	Chicago	1.83	1.60	1.76	1.73
15	Wisconsin	1.52	1.30	1.92	1.58
16	Ohio State	1.53	1.50	1.15	1.39
17	Minnesota	1.58	0.93	1.48	1.33
18	Duke	1.35	1.28	1.33	1.32
19	Princeton	1.37	1.18	1.25	1.27
20	Pennsylvania	1.31	1.08	1.10	1.16

in his *An Assessment of Quality in Graduate Education.*[7] It is an average of three indexes and is computed in the following way. First, the pool of institutions to be compared is determined. (In the example, shown as table 2, this pool is all ARL libraries and the data are for 1976–77). Second, three variables are isolated: (a) total volumes, (b) volumes added, and (c) periodicals received. A separate index is formed for each variable by finding the average for each variable and dividing the average value into the value for each institution.

For example, assume that the average number of periodicals held in ARL libraries is 15,000, and three institutions have totals respectively of 60,000, 15,000, and 7,500. Dividing the average, 15,000, into each of these figures yields index values of 4, 1, and .5. Similarly, values are found for each institution for the other two variables: volumes added and total volumes. Then the three index values for each institution are summed, divided by three, and sorted into descending order. For example, refer to institution number 8 in table 2. It is Michigan. It has index values of 2.31, 1.81, and 1.92. The sum of these is 6.04. Dividing this by 3 yields 2.01, the overall library resources index.

Mr. Cartter's index was based on 1963–64 data. His general conclusion at that time was: "Those libraries which fall below .5 are probably too weak to support quality graduate programs in a wide range of fields, although they may be adequate for an institution that specializes in technology or in advanced work in a very limited number of areas."[8]

Table 2 demonstrates an application of the Library Resources Index to twenty ARL libraries, using 1976–77 ARL data.

Regression Analysis Tables Using ARL Data, 1975–76

In analyzing data from ARL libraries, the strongest statistical relationships are found to exist when these libraries are categorized in some way. Therefore, by way of example, ARL libraries may be grouped in four different ways:

1. All ARL academic libraries.
2. All private ARL academic libraries in the U.S.
3. All public ARL academic libraries in the U.S.
4. All Canadian ARL academic libraries.

Further, for each group additional tables may be developed that predict the values of certain different (dependent) variables based upon the value of other (independent) variables. Six variables, for example, which can be examined are:

1. Professional staff
2. Total staff
3. Gross volumes added
4. Expenditures for library materials
5. Total library expenditures
6. Current periodicals held

For each library in each of the four groups noted above, the following predictions then can be made:

1. Number of professional staff based on number of volumes held
2. Number of total staff based on number of volumes held
3. Number of gross volumes added based on volumes held

TABLE 3
Example of Regression Analysis Applied to Size of Professional Staff (Y)

Institution	Y Value	Y Estimate	Residual	Display	
Library A	37	39	−2	X	
Library B	52	48	+4		X
Library C	63	55	+8		X
Library D	60	72	−12	X	

least squares line normalized

4. Expenditures for library materials based on gross volumes added and volumes held
5. Total expenditures based on volumes held, gross volumes added, and total staff
6. Number of current serials based on number of volumes held

Thus, for each table there can be plotted a display of variables, together with observations for each institution, and which include for each dependent variable its actual value, its estimated value, and the residual, which is the difference between the actual and the estimated value. For example, assume we have the display shown above as table 3, which predicts the number of professional staff a library is expected to have based upon the number of volumes held.

The first column identifies each institution; the second shows the actual value for each variable; the third shows the expected value based on the regression equation computation which has been done; the fourth is the difference between columns two and three; and the fifth is a plot of the data.

Looking at Library A, we see that it has thirty-seven professional staff, but based on the other libraries in its comparison class, it would be expected to have thirty-nine. The actual value is two fewer than expected, so its position on the graph is plotted to the left of the least squares line. (See any standard textbook on statistics for detailed explanation of this technique.) Libraries B and C have more professionals than would be expected, so they are plotted to the right of the line. Consequently, by inspection, the library manager can note any obvious anomalies between his or her institution and others.

References for Appendix

1. Doctoral granting institutions in Carnegie Commission on Higher Education. *A Classification of Institutions of Higher Education* (Berkeley, Calif.: The Commission, 1973). p.1–2, 9–22.
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3. Fritz Machlup, "Our Libraries: Can We Measure Their Holdings and Acquisitions," *AAUP Bulletin* 62:303–7 (Oct. 1976).
4. See, for example, Morris Hamburg and others, *Library Planning and Decision Making Systems* (Cambridge, Mass.: MIT Press, 1974).
5. William J. Baumol and Matityahu Marcus, *Economics of Academic Libraries* (Washington, D.C.: American Council on Education, 1973).
6. F. W. Lancaster, *The Measurement and Evaluation of Library Services* (Washington, D.C.: Information Resources, 1977), p.323.
7. Allan M. Cartter, *An Assessment of Quality in Graduate Education* (Washington, D.C.: American Council on Education, 1966).
8. *Ibid.*, p.104.

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APPENDIX C

Statistical Aids

STATISTICAL AIDS

Sampling

Upon occasion, it becomes necessary to test or study a population or set of data. Sometimes the magnitute of data is so great that checking every element becomes impractical. When this occurs, the data can be studied, with some qualifications, using techniques of statistical sampling and interference.

A population is the totality of elements experiencing common characteristics or observations in common. A sample is some portion of elements drawn from the population that represents the population. If, for example, a library had 24,000 titles classified in the Dewey 650's and wanted to know how many of these titles had blue bindings, instead of counting the blue bindings from the entire population of 24,000 titles, the blue bindings from a sample of the population can be more easily counted. The result of the sample can then be "inferred" or generalized to the entire population. If a valid sample of 24,000 titles were found to be 600 titles and if 200 (or one-third) of the 600 titles were bound in blue, then generalizing the one-third to the entire population suggests that 8,000 of the 24,000 titles are bound in blue.

Sample Size Determination

Although formulas exist for determing sample size, it is usually easier to use sample size tables. (See pp. C.6 - C.9) Four elements of information are needed to determine the sample size.

1. Size of Population. This refers to the total number of elements within the population.

2. Confidence Level. Confidence levels of 95% and 99% are common to most sampling. A confidence level of 95% indicates a desire to be correct 95 times out of 100. Stated another way, a 95% confidence level indicates that a sample that can result in more than 5 errors per 100 occurrences is intolerable.

3. Precision of Reliability. Reliability denotes whether or not repeated sampling will produce the same results. A reliability of 5% indicates a willingness to tolerate a 5% margin of unreliability in either direction of the mean or average value.

4. Expected Rate of Occurrence. If you have a good prior idea of the outcome, you may cut down the necessary sample size by estimating the outcome. For example, if, in the prior example, you expect 30% blue books in the population, you may use a sample size table determined for the rate not to exceed 30% or to be less than 70% and reduce the necessary sample size. If you have no idea as to how many blue books are in the population, you must use a table based upon a 50% rate of occurrence. (A 50% table requires the largest sample size). This table will require a larger sample size since there is no educated guess.

The use of the tables is very simple. First, determine an acceptable confidence level and apply your estimate of expected occurrences. Then, turn to the appropriate table, find the size of your population in the left hand column, determine the desired degree of reliability, and find the number at the intersection of the population line and reliability column. This number represents the appropriate sample size for the population given the constraints indicated.

Example: Assume a need to determine the number of French language books in a population of 44,000 books. Assume an expected rate of occurrence of not more than 15% of the population. Assume also a desire for 95% confidence and 4% reliability. Look at the chart which matches an expected rate of occurrence of not more than 15% and a confidence level of 95%. Find the intersection for the column for 4% and the line for a population size of 50,000 (since 44,000 is included in 50,000 but exceeds the next lower population of 20,000). The sample size at this intersection is 304 and becomes the number of samples necessary from a population of 44,000 given the above constraint.

Sampling Techniques

In libraries, it is usually necessary to sample in one of two ways. One method of sampling is by entering the population via a random number and counting to the sample.[4] The other method entails measuring to a sample as in a shelflist.

A. Counting to a Sample. This technique is also referred to as "systematic sampling." It is conducted as follows: Suppose it is necessary to select a sample of 300 books from a population of 15,000 books. Dividing 15,000 by 300, we find we should select about every 50th item for inclusion.

In selecting a sample by this technique, we must first choose a number at random from a random number table. (The technique for choosing this number will be explained below). Assuming the number turned out to be 27, the first book n the sample would be the 27th one, such as 77, 127, 177, 227, . . . , 14,977.[5] This would complete the sample.

B. Measuring to a Sample.[6] Many times, the number of elements between samples in a population is so great that it is difficult to count to the sample, and measuring must be undertaken. When this is necessary the population elements must be uniform in size. This is the situation which usually exists in files such as a library's shelflist.

In obtaining samples from shelflist (or similar files), proceed through the following steps, using the Shelflist Distribution Form, p. C.5.

Step 1: To determine the number of cards in the shelflist population, take seven one-inch samples. This is done by counting the cards in each of seven one-inch samples. Each sample should be taken in a different position and, where possible, in a different drawer. The total number of cards counted in each sample is tabulated and totaled. The sum of the seven cards counted in each sample is tabulated and totaled.

The sum of the seven samples is then divided by seven. The quotient is the number of cards per inch. (Note: If there are more than four cards difference in any one or more of the seven samples, the sampling must be repeated as the samples were apparently not measured under uniform pressure.)

Step 2: (a) Measure the entire section of shelflist within which the population under examination exists. This is done by pressing the cards in each drawer fairly tightly and measuring them with a retractable metal ruler. The measurement of each drawer is tabulated and totaled to get the overall length.

(b) Then, multiply the overall length by the number of cards per inch to obtain the number of cards in the shelflist.

Step 3: Determine the number of samples necessary for the study by following the procedures under "Sample Size Determination."

(a) Divide the total number of cards in the entire population by the total number of samples necessary. This result is the number of cards between samples.

(b) Divide this result (number of cards between samples) by the average number of cards per inch which was determined in Step 2. This final result will be the number of inches between samples in hundredths.

Step 4: Convert inches from hundredths to sixteenths by using the interval conversion table on the Shelflist Distribution Form.

Step 5: Determine the entry point into the population by selecting a random number from a random number list within the number of cards between samples. Begin the sampling process by counting to this number and then measuring to each additional sample within the population, using the sampling interval obtained in Step 4.

Example:

1. Measure the entire shelflist of the Dewey 650's. (Assume this total is 300 inches.)

2. Take seven one-inch samples from seven different drawers or from seven different places, if fewer than seven different drawers within the shelflist, and average them. (Assume this average to be 100 cards per inch, which is the average in the BYU Library shelflist.)

3. Multiply 100 cards per inch by 300 inches of Dewey 650's and get 30,000 cards for a total population.

4. Determine the number of samples necesary by applying the procedure in "Sample Size Determination." (Assume this yields 500 samples.)

5. Divide the total number of cards in the population by the number of samples: 24,000 divided by 500 = 60. This is the number of cards between samples.

6. Divide the number of cards between samples by the number of cards per inch: 60 divided by 100 = .6 inches. (See conversion table on Shelflist Distribution Form p. C.5.) This is the distance between samples.

7. Select a random number within the number of cards between samples, in this case between 1 and 60. This is done by use of a random number table. (See p. C.6.) Begin at the first of the population and count to the card that corresponds to the random number. This is the first sample.

8. From the first sample, measure .6 inches (5/8") and take another sample. Repeat this sampling throughout the entire population until you have your 500 sample items.

C.5

Shelflist Sections Measured: ______________________________

SHELFLIST DISTRIBUTION FORM

Step 1: Take seven different samples from shelflist and record the number of cards per inch in each sample.

Sample 1 ____________
Sample 2 ____________
Sample 3 ____________
Sample 4 ____________

Sample 5 ____________
Sample 6 ____________
Sample 7 ____________

Sum: ____________

Divide sum above by seven = ____________ (Average number of cards/inch)

Step 2: (a) Measure length of shelflist in inches = ____________ (Inches in shelflist)

(b) Multiply total inches of shelflist by average number of cards per inch (Step 1 x Step 2) = ____________ (Total cards in shelf list)

Step 3: (a) Divide total cards in shelflist by number of sample items necessary = ____________ (Number of cards between samples)

(b) Divide number of cards per sample interval by average number of cards per inch (Step 5 ÷ Step 2) = ____________ (Inches per sample interval in hundredths)

Step 4: Convert inches per interval from "hundredths" to "sixteenths" by means of Index table below = ____________ (Inches per sample interval in sixteenths)

Internal Index

Quotient/Sixteenths

0.0625 = 1/16
.1250 = 2/16
.1875 = 3/16
.2500 = 4/16
.3125 = 5/16
.3750 = 6/16
.4375 = 7/16
.5000 = 8/16

Quotient/Sixteenths

0.5625 = 9/16
.6250 = 10/16
.6875 = 11/16
.7500 - 12/16
.8125 = 13/16
.8750 = 14/16
.9375 = 15/16
1.0 = 16/16

TABLE 20. TABLE OF SAMPLE SIZES REQUIRED FOR FINITE POPULATIONS, FOR SELECTED CONFIDENCE LEVELS AND VARIOUS SAMPLE RELIABILITY LIMITS FOR SAMPLING ATTRIBUTES[12]

95% Confidence Level

Percent in Population Assumed to Be 50%*

Size of Population	Sample Size for Reliability of				
	±1%	±2%	±3%	±4%	±5%
1,000	**	**	**	375	278
2,000	**	**	696	462	322
3,000	**	1334	787	500	341
4,000	**	1500	842	522	350
5,000	**	1622	879	536	357
10,000	4899	1936	964	566	370
20,000	6489	2144	1013	583	377
50,000	8057	2291	1045	593	381
100,000	8763	2345	1056	597	383
500,000 to ∞	9423	2390	1065	600	384

* *This section of this table should be used only when the sampler is unable or unwilling to estimate a maximum (or minimum) occurrence rate to be expected. The use of this section of the table, while conservative, will result in a much larger sample size than found in other sections of the table where such an estimate is used.*

** *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

Source: Adapted from and extended from tables in H. P. Hill, J. L. Roth, and H. Arkin, *Sampling in Auditing* (New York: The Ronald Press, 1962) with permission of the publisher.

99% Confidence Level

Percent in Population Assumed to be 50%*

Size of Population	Sample Size for Reliability of				
	±1%	±2%	±3%	±4%	±5%
1,000	**	**	**	**	400
2,000	**	**	959	683	498
3,000	**	**	1142	771	544
4,000	**	**	1262	824	569
5,000	**	2267	1347	859	586
10,000	**	2932	1556	939	622
20,000	9068	3435	1688	986	642
50,000	12456	3830	1778	1016	655
100,000	14229	3982	1810	1026	659
500,000 to ∞	16056	4113	1836	1035	663

* *This section of this table should be used only when the sampler is unable or unwilling to estimate a maximum (or minimum) occurrence rate to be expected. The use of this section of the table, while conservative, will result in a much larger sample size than found in other sections of the table where such an estimate is used.*

** *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

C.6

SAMPLE SIZES

95% Confidence Level

**Expected Rate of Occurrence Not over 5%
or Not Less than 95%**

Size of Population	Sample Size for Reliabilities of			
	±0.5%	±1%	±2%	±3%
1,000	*	*	313	169
2,000	*	954	371	184
3,000	*	1134	396	190
4,000	*	1253	409	192
5,000	*	1336	418	195
10,000	4220	1543	436	199
20,000	5348	1672	446	201
50,000	6370	1760	452	202
100,000	6803	1791	454	202
500,000 to ∞	7196	1818	456	203

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

SAMPLE SIZES

99% Confidence Level

**Expected Rate of Occurrence Not over 5%
or Not Less than 95%**

Size of Population	Sample Size for Reliabilities of			
	±0.5%	±1%	±2%	±3%
1,000	*	*	441	260
2,000	*	*	565	298
3,000	*	*	624	314
4,000	*	1763	658	322
5,000	*	1934	681	327
10,000	*	2397	731	338
20,000	7730	2721	758	344
50,000	10063	2963	776	348
100,000	11189	3056	782	349
500,000 to ∞	12289	3132	787	350

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

C.7

SAMPLE SIZES

95% Confidence Level

Expected Rate of Occurrence Not over 15%
or Not Less than 85%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±4%
1,000	*	*	353	235
2,000	*	760	428	266
3,000	*	870	461	278
4,000	*	938	479	284
5,000	2474	984	491	289
10,000	3288	1091	516	297
20,000	3935	1154	530	302
50,000	4461	1195	538	304
100,000	4669	1210	541	305
500,000 to ∞	4850	1222	544	306

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

SAMPLE SIZES

99% Confidence Level

Expected Rate of Occurrence Not over 15%
or Not Less than 85%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±4%
1,000	*	*	485	346
2,000	*	*	640	418
3,000	*	1241	716	450
4,000	*	1384	761	467
5,000	*	1487	791	478
10,000	4583	1746	859	502
20,000	5946	1913	898	515
50,000	7237	2029	923	523
100,000	7801	2071	931	526
500,000 to ∞	8320	2106	938	528

* *In these cases more than 50% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

C.8

SAMPLE SIZES

95% Confidence Level

Expected Rate of Occurrence Not over 30%
or Not Less than 70%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±5%
1,000	*	*	473	244
2,000	*	*	619	278
3,000	*	1206	690	291
4,000	*	1341	732	299
5,000	*	1437	760	303
10,000	4465	1678	823	313
20,000	5749	1832	858	318
50,000	6946	1939	881	321
100,000	7465	1977	888	321
500,000 to ∞	7939	2009	895	322

* *In these cases more than 60% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

SAMPLE SIZES

99% Confidence Level

Expected Rate of Occurrence Not over 30%
or Not Less than 70%

Size of Population	Sample Size for Reliabilities of			
	±1%	±2%	±3%	±5%
1,000	*	*	*	360
2,000	*	*	873	436
3,000	*	*	1021	470
4,000	*	1862	1116	489
5,000	*	2053	1182	502
10,000	*	2584	1341	527
20,000	8213	2967	1437	542
50,000	10898	3257	1502	551
100,000	12231	3367	1525	554
500,000 to ∞	13557	3460	1544	557

* *In these cases more than 60% of the population is required in the sample. Since the normal approximation of the hypergeometric distribution is a poor approximation in such instances, no sample value is given.*

C.9

SELECTING A RANDOM NUMBER FROM A RANDOM NUMBER TABLE

A major problem in using a random number table is an unbiased selection of the first random number. Most methods for accomplishing this are arbitrary. The most important consideration is that the method of selection be determined before turning to the table.[7]

If it were necessary to take 100 samples from a population of 800 books, it would be necessary to sample every eighth book (800 divided by 100 = 8). To arrive at the entry point using a random number table, it is necessary to choose from the table a number between 1 and 8.[8] A predetermined arbitrary method to derive this number involves several steps.

Step 1: Put your pencil down on any number in a random number table.

Step 2: Count 3 numbers to the right.

Step 3: Count 4 numbers down and, proceeding downward, select the first number between 1 and 8.

Assuming the number 3 is the first number encountered between 1 and 8, then the third book would be the first sample taken. Proceeding, then, with every 8th sample thereafter, the numbers 11, 19, 27, 35, etc., would also be selected.[9]

The use of the random number table to begin the sampling is necessary if every element within the population is to have an equally likely chance of being selected. To grant integrity to the study, every book selected at random must be used in the study. Any temptation to skip a properly selected sample must be overcome.

Summary

Use of the above procedures will allow a collection of statistical samples for most library purposes. If needs arise in the process of collection assessment which are not met by the above, most simple statistics texts or handbooks can provide answers.

RANDOM NUMBER TABLE[11]

03991	10461	93716	16894	66083	24653	84609	58232	88618	19161
38555	95554	32886	59780	08355	60860	29735	47762	71299	23853
17546	73704	92052	46215	55121	29281	59076	07936	27954	58909
32643	52861	95819	06831	00911	98936	76355	93779	80863	00514
69572	68777	39510	35905	14060	40619	29549	69616	33564	60780
24122	66591	27699	06494	14845	46672	61958	77100	90899	75754
61196	30231	92962	61773	41839	55382	17267	70943	78038	70267
30532	21704	10274	12202	39685	23309	10061	68829	55986	66485
03788	97599	75867	20717	74416	53166	35208	33374	87539	08823
48228	63379	85783	47619	53152	67433	35663	52972	16818	60311
60365	94653	35075	33949	42614	29297	01918	28316	98953	73231
83799	42402	56623	34442	34994	41374	70071	14736	09958	18065
32960	07405	36409	83232	99385	41600	11133	07586	15917	06253
19322	53845	57620	52606	66497	68646	78138	66559	19640	99413
11220	94747	07399	37408	48509	23929	27482	45476	85244	35159
31751	57260	68980	05339	15470	48355	88651	22596	03152	19121
88492	99382	14454	04501	20094	98977	74843	93413	22109	78508
30934	47744	07481	83828	73788	06533	28597	20405	94205	20380
22888	48893	27499	98748	60530	45128	74022	84617	82037	10268
78212	16993	35902	91386	44372	15486	65741	14014	87481	37220
41849	84547	46850	52326	34677	58300	74910	64345	19325	81549
46352	33049	69248	93460	45305	07521	61318	31855	14413	70951
11087	96294	14013	31792	59747	67277	76503	34513	39663	77544
52701	08337	56303	87315	16520	69676	11654	99893	02181	68161
57275	36898	81304	48585	68652	27376	92852	55866	88448	03584
20857	73156	70284	24326	79375	95220	01159	63267	10622	48391
15633	84924	90415	93614	33521	26665	55823	47641	86225	31704
92694	48297	39904	02115	59589	49067	66821	41575	49767	04037
77613	19019	88152	00080	20554	91409	96277	48257	50816	97616
38688	32486	45134	63545	59404	72059	43947	51680	43852	59693
25163	01889	70014	15021	41290	67312	71857	15957	68971	11403
65251	07629	37239	33295	05870	01119	92784	26340	18477	65622
36815	43625	18637	37509	82444	99005	04921	73701	14707	93997
64397	11692	05327	82162	20247	81759	45197	25332	83745	22567
04515	25624	95096	67946	48460	85558	15197	18782	16930	33361
83761	60873	43253	84145	60833	25983	01291	41349	20368	07126
14387	06345	80854	09279	43529	06318	38384	74761	41196	37480
51321	92246	80088	77074	88722	56736	66164	49431	66919	31678
72472	00008	80890	18002	94813	31900	54155	83436	35352	54131
05466	55306	93128	18464	74457	90561	72848	11834	79982	68416
39528	72484	82474	25593	48545	35247	18619	13674	18611	19241
81616	18711	53342	44276	75122	11724	74627	73707	58319	15997
07586	16120	82641	22820	92904	13141	32392	19763	61199	67940
90767	04235	13574	17200	69902	63742	78464	22501	18627	90872
40188	28193	29593	88627	94972	11598	62095	36787	00441	58997
34414	82157	86887	55087	19152	00023	12302	80783	32624	68691
63439	75363	44989	16822	36024	00867	76378	41605	65961	73488
67049	09070	93399	45547	94458	74284	05041	49807	20288	34060
79495	04146	52162	90286	54158	34243	46978	35482	59362	95938
91704	30552	04737	21031	75051	93029	47665	64387	99782	93478

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19612	78430	11661	94770	77603	65669	86868	12665	30012	75989
39141	77400	28000	64238	73258	71794	31340	26256	66453	37016
64756	80457	08747	12836	03469	50678	03274	43423	66677	82556
92901	51878	56441	22998	29718	38447	06453	25311	07565	53771
03551	90070	09483	94050	45938	18135	36908	43321	11073	51803
98884	66209	06830	53656	14663	56346	71430	04909	19818	05707
27369	86882	53473	07541	53633	70863	03748	12822	19360	49088
59066	75974	63335	20483	43514	37481	58278	26967	49325	43951
91647	93783	64169	49022	98588	09495	49829	59068	38831	04838
83605	92419	39542	07772	71568	75673	35185	89759	44901	74291
24895	88530	70774	35439	46758	70472	70207	92675	91623	61275
35720	26556	95596	20094	73750	85788	34264	01703	46833	65248
14141	53410	38649	06343	57256	61342	72709	75318	90379	37562
27416	75670	92176	72535	93119	56077	06886	18244	92344	31374
82071	07429	81007	47749	40744	56974	23336	88821	53841	10536
21445	82793	24831	93241	14199	76268	70883	68002	03829	17443
72513	76400	52225	92348	62308	98481	29744	33165	33141	61020
71479	45027	76160	57411	13780	17632	52308	77762	88874	33697
83210	51466	09088	50395	26743	05306	21706	70001	99439	80767
68749	95148	94897	78636	96750	09024	94538	91143	96693	61886
05184	75763	47075	88158	05313	53439	14908	08830	60096	21551
13651	62546	96892	25240	47511	58483	87342	78818	07855	39269
00566	21220	00292	24069	25072	29519	52548	54091	21282	21296
50958	17695	58072	68990	60329	95955	71586	63417	35947	67807
57621	64547	46850	37981	38527	09037	64756	03324	04986	83666
09282	25844	79139	78435	35428	43561	69799	63314	12991	93516
23394	94206	93432	37836	94919	26846	02555	74410	94915	48199
05280	37470	93622	04345	15092	19510	18094	16613	78234	50001
95491	97976	38306	32192	82639	54624	72434	92606	23191	74693
78521	00104	18248	75583	90326	50785	54034	66251	35774	14692
96345	44579	85932	44053	75704	20840	86583	83944	52456	73766
77963	31151	32364	91691	47357	40338	23435	24065	08458	95366
07520	11294	23238	01748	41690	67328	54814	37777	10057	42332
38423	02309	70703	85736	46148	14258	29236	12152	05088	65825
02463	65533	21199	60555	33928	01817	07396	89215	30722	22102
15880	92261	17292	88190	61781	48898	92525	21283	88581	60098
71926	00819	59144	00224	30570	90194	18329	06999	26857	19238
64425	28108	16554	16016	00042	83229	10333	36168	65617	94834
79782	23924	49440	30432	81077	31543	95216	64865	13658	51041
35337	74538	44553	64672	90960	41849	93865	44608	93176	34851
05249	29329	19715	94082	14738	86667	43708	66354	93692	25527
56463	99380	38793	85774	19056	13939	46062	27647	66146	63210
96296	33121	54196	34108	75814	85986	71171	15102	28992	63165
98380	36269	60014	07201	62448	46385	42175	88350	46182	49126
52567	64350	16315	53969	80395	81114	54358	64578	47269	15747
78498	90830	25955	99236	43286	91064	99969	95144	64424	77377
49553	24241	08150	89535	08703	91041	77323	81079	45127	93686
32151	07075	83155	10252	73100	88618	23891	87418	45417	20268
11314	50363	26860	27799	49416	83534	19187	08059	76677	02110
12364	71210	87052	50241	90785	97889	81399	58130	64439	05614

C.11

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[10] Herbert Arkin and Raymond R. Colton, *Tables for Statisticians* (New York: Barnes and Noble, Inc., 1972), pp. 145-52. (BYU call # 311.24/Ar48t)

[11] Marcia K. Johnson and Robert M. Liebert, *Statistics: Tools of the Behavioral Sciences* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1977), pp. 212-13. (BYU call # HA 29/.J57)

APPENDIX D

SELECTED SOURCES ON COLLECTION ASSESSMENTS

D.1

USEFUL SOURCES ON COLLECTION ASSESSMENTS

1. *Bonn, George S. "Evaluation of the Collection," Library Trends, 22 (Jan. 1974), 265-304. A comprehensive review of the most widely used collection assessment methods. Includes an extensive bibliography.

2. Buckland, Michael H. Book Availability and the Library User. New York: Pergamon Press, 1975. Treats the theoretical and practical aspects of the logistical problem of making library books physically available when needed by a library user. (BYU Call # 025.5/B856b)

3. *"Guidelines for the Evaluation of Library Collections," Collection Development Committee, Resources Section, Resources and Technical Services Division, American Library Association, 1977. A draft of guidelines for collection evaluations prepared for a Collection Development Preconference, June 1977. It provides a good overview of collection evaluation purposes and methods and procedures. It relies heavily on Bonn (1) and Lancaster (8).

4. *Kantor, Paul B. "Availability Analysis," Journal of the American Society for Information Science, (Sept.-Oct. 1976), 311-319. Outlines and shows the results of a technique for measuring the availability of library materials and the impact of such studies on management decisions.

5. *Kantor, Paul B. "Availability and Accessibility Measures," CAP Manual. Association of Research Libraries. A discussion and explanation of the availability and accessibility measures used in this manual.

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14. *Saracevic, T., W. M. Shaw, Jr., and Paul B. Kantor. "Causes and Dynamics of User Frustration in an Academic Library," *College and Research Libraries*, 38 (Jan. 1977), 7-18. A report of an availability study used at Case Western Reserve University longitudinally. Provides further amplification on Kantor (4).

15. *Shaw, W.M., Jr. "A Practical Journal Usage Technique," *College and Research Libraries*, 39 (Nov. 1978) 479-484. A discussion of the periodical use study recommended in Chapter 3 of this manual.

16. Stueart, Robert D. and George B. Miller, Jr., eds. *Collection Development in Libraries*. *Foundations in Library and Information Science, vol. 10.* Greenwich, Conn.: JAI Press, 1980. A collection of essays on collection development with chapters particularly relevant to assessments: Citation and Use Studies, and Collection Evaluation or Analysis: Matching Library Acquisitions to Library Needs.

17. *Urquhart, John A. and J.L. Schofield. "Measuring Readers' Failure at the Shelf," *Journal of Documentation*, 27 (Dec. 1971), 273-286. Report of a measuring technique for determining why library users fail to locate materials in a library. The technique is not included in this manual, but the article is included here as an alternative procedure that some evaluators might want to use.

*Offprints of these titles are included in Appendix E.